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8 UNITED STATES DISTRICT COURT
9 SOUTHERN DISTRICT OF CALIFORNIA
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11 IN RE: QUALCOMM LITIGATION,

Case No.: 17-cv-00108-GPC-MDD

12 **TENTATIVE ORDER:**

13 **(1) CONSTRUING DISPUTED**
14 **CLAIM TERMS OF U.S. PATENT**
15 **NOS. 7,096,021; 6,556,549; 9,137,822;**
16 **6,694,469; 7,289,630; 7,095,725**
17 **[DKT. NOS. 299, 300]**

18 **(2) DENYING QUALCOMM'S**
19 **MOTION TO STRIKE APPLE'S**
20 **FIRST AND SECOND AMENDED**
21 **INVALIDITY CONTENTIONS**
22 **[DKT. NO. 331]**

Apple, Inc. and the Contract Manufacturers¹ seek declarations of non-infringement and invalidity as to nine of Qualcomm's patents ("patents-in-suit").² The parties now

23 ¹ Defendants and Counterclaimants in the pre-consolidation '1010 action are Compal Electronics, Inc. ("Compal"), FIH Mobile Ltd. and Hon Hai Precision Industry Co. (together "Foxconn"), Pegatron Corporation ("Pegatron"), and Wistron Corporation ("Wistron") and will be collectively referred to as the "Contract Manufacturers" or "CM's." As Apple and the CMs have brought the same arguments, the Court will refer to Apple and the CMs claims in shorthand as "Apple's" Claims.

24 ² This Court previously dismissed nine "Additional Patents-in-Suit" added by Apple and the CMs in the First Amended Complaint and the Contract Manufacturers' Counterclaims for a lack of declaratory judgment jurisdiction. Dkt. No. 167. The Court granted leave to amend, but the parties did not file any amended pleadings as to the Additional Patents in Suit. *See id.*

1 seek construction of ten terms used in the claims of the following patents-in-suit: U.S.
2 Patent Nos. 7,096,021 ('021 Patent); 7,289,630 ('630 Patent); 6,556,549 ('549 Patent);
3 9,137,822 ('822 Patent); 6,694,469 ('469 Patent); 7,095,725 ('725 Patent). On January
4 25, 2018, the parties filed their opening claim construction briefs and included a joint
5 appendix of common exhibits. Dkt. Nos. 299-300.³ The parties filed responsive claim
6 construction briefs on February 8, 2018. Dkt. Nos. 312, 341.⁴

7 The Court held a technology tutorial on March 8, 2018. Dkt. No. 361. The Court
8 will hold a claim construction hearing on March 22, 2018 at 9 AM. The parties will be
9 given the opportunity to address the tentative ruling at the scheduled hearing. The Court
10 has reviewed the claims, specifications, and other relevant evidence, and has considered
11 the briefing and arguments of the parties and provides this tentative decision: (1)
12 construing disputed terms of six of the nine patents-in-suit and (2) denying Qualcomm's
13 Motion to Strike Apple's First and Second Amended Invalidity Contentions.

14 **I. CLAIM CONSTRUCTION**

15 **A. Legal Standard**

16 Claim construction is a matter of law to be determined by the court. *Teva Pharm.*
17 *USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 838 (2015); *Markman v. Westview Instr., Inc.*,
18 517 U.S. 370, 372 (1996). The purpose of claim construction is for the court to
19 "determin[e] the meaning and scope of the patent claims asserted to be infringed." *O2*
20 *Micro Intern. Ltd. v. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1360 (Fed. Cir.
21

22
23 ³ The Court refers to Apple's Opening Construction Brief (Dkt. No. 300) in shortform as "AOCB" and
24 Qualcomm's Opening Construction Brief (Dkt. No. 299) as "QOCB." Responding briefs are referred to
25 as QRCB (Dkt. No. 312) and ARCB (Dkt. No. 341).

26 ⁴ Apple originally filed its responsive claim construction brief under seal. Dkt. No. 315. The Court
27 ordered Qualcomm to respond to the motion to seal and directed the parties to meet and confer prior to
28 the filing of documents designated confidential by the opposing party. Dkt. No. 336. Following this
order, Apple filed a notice to withdraw its motion to seal. Dkt. No. 338. The Court denied as moot
Apple's motion to seal and ordered Apple to file its brief publically. Dkt. No. 340. Apple filed this non-
redacted responsive brief on February 23, 2018. Dkt. No. 341.

1 2008). “It is a bedrock principle of patent law that the claims of a patent define the
2 invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*,
3 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal marks omitted). As such,
4 claims are to be construed in a manner that “stays true to the claim language and most
5 naturally aligns with the patent’s description of the invention.” *Id.* at 1316.

6 To construe disputed terms, the court first looks to the claims themselves. *See*
7 *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed.
8 Cir. 2004). Generally, claim language is given its “ordinary and customary meaning,”
9 which is “the meaning that the term would have to a person of ordinary skill in the art in
10 question at the time of the invention.” *Phillips*, 415 F.3d at 1312-13. In cases where the
11 “ordinary and customary meaning” is clear, claim construction involves “little more than
12 the application of the widely accepted meaning of commonly understood words.” *Id.* at
13 1314. In cases where it is not immediately apparent what a person of ordinary skill in the
14 art would understand a claim to mean, the court looks to other sources to decipher the
15 correct meaning. *Id.* at 1314. Those sources include intrinsic and extrinsic evidence
16 “available to the public that show what a person of skill in the art would have understood
17 disputed claim language to mean.” *Id.* “Importantly, the person of ordinary skill in the
18 art is deemed to read the claim term not only in the context of the particular claim in
19 which the disputed term appears, but in the context of the entire patent, including the
20 specification.” *Id.* at 1313.

21 When such clarity is required, a court begins by examining the intrinsic record,
22 consisting of the language of the claims, the patent specification and, if in evidence, the
23 prosecution history of the challenged patent. *Id.* at 1314; *see also Vederi, LLC v. Google,*
24 *Inc.*, 744 F.3d 1376, 1382 (Fed. Cir. 2014). “The appropriate starting point . . . is always
25 with the language of the asserted claim itself.” *Comark Comms., Inc. v. Harris Corp.*,
26 156 F.3d 1182, 1186 (Fed. Cir. 1998). The context in which a disputed term appears
27 often provides substantial guidance as to the meaning of the term. *See Phillips*, 415 F.3d
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1 at 1313-14. A disputed term should be construed “consistently with its appearance in
2 other places in the same claim or in other claims of the same patent.” *Rexnord Corp. v.*
3 *Latiram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001). “A claim construction that gives
4 meaning to all the terms of the claim is preferred over one that does not do so.” *Vederi*,
5 744 F.3d at 1383.

6 As for other intrinsic evidence, the specification “is always highly relevant to the
7 claim construction analysis” and “usually dispositive.” *Philips*, 415 F.3d at 1315. In
8 fact, it has been observed that “[a]part from the claim language itself, the specification is
9 the single best guide to the meaning of a claim term.” *Vederi*, 744 F.3d at 1382; *see also*
10 *Philips*, 415 F.3d at 1315. “[A] claim construction that excludes [a] preferred
11 embodiment [described in the specification] is rarely, if ever, correct and would require
12 highly persuasive evidentiary support.” *Adams Respiratory Therapeutics, Inc. v. Perrigo*
13 *Co.*, 616 F.3d 1283, 1290 (Fed. Cir. 2010) (internal marks omitted). Furthermore, the
14 “written description part of the specification” should not be read to “delimit the right to
15 exclude [as] [t]hat is the function and purpose of claims.” *Markman*, 52 F.3d at 980.
16 Stated differently, a “claim construction must not import limitations from the
17 specification into the claims.” *Douglas Dynamics, LLC v. Buyers Prods. Co.*, 717 F.3d
18 1336, 1342 (Fed. Cir. 2013). It is, therefore, “improper to read limitations from a
19 preferred embodiment described in the specification—even if it is the only
20 embodiment—into the claims absent a clear indication in the intrinsic record that the
21 patentee intended the claims to be so limited.” *Dealertrack, Inc. v. Huber*, 674 F.3d
22 1315, 1327 (Fed. Cir. 2012) (citations omitted).

23 “A patentee is,” however, “free to be his own lexicographer.” *Markman*, 52 F.3d
24 at 980. Where the inventor gives a term a special meaning, “the inventor’s lexicography
25 governs.” *Philips*, 415 F.3d at 1316. Similarly, where the inventor specifically disclaims
26 a certain scope in the specification, that disclaimer is dispositive. *Id.*

1 In most situations, “an analysis of the intrinsic evidence alone will resolve any
2 ambiguity in a disputed claim term.” *Vitrionics Corp. v. Conceptronic, Inc.*, 90 F.3d
3 1576, 1583 (Fed. Cir. 1996). Where that is the case, “it is improper to rely on the
4 extrinsic evidence” as “[t]he claims, specification, and file history, rather than extrinsic
5 evidence, constitute the public record of the patentee’s claim, a record on which the
6 public is entitled to rely.” *Id.* However, to the extent “the intrinsic record is ambiguous,
7 and when necessary,” a court “may rely on extrinsic evidence, which consists of all
8 evidence external to the patent and prosecution history, including expert and inventor
9 testimony, dictionaries and learned treatises.” *Power Integrations, Inc. v. Fairchild*
10 *Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1360 (Fed. Cir. 2013). Extrinsic evidence,
11 however, is “less significant than the intrinsic record” and “less reliable than the patent
12 and its prosecution history in determining how to read claim terms.” *Phillips*, 415 F.3d at
13 1317-18 (internal quotations and citation omitted).

14 Finally, “terms do not need to be construed [where] they are neither unfamiliar to
15 the jury, confusing to the jury, nor affected by the specification or prosecution history.”
16 *See Bd. of Trustees of Leland Stanford Junior Univ. v. Roche Molecular Sys., Inc.*, 528 F.
17 Supp. 2d 967, 976 (N.D. Cal. 2007) (citing *United States Surgical Corp. v. Ethicon, Inc.*,
18 103 F.3d 1554, 1568 (Fed. Cir. 1997) (“Claim construction is a matter of resolution of
19 disputed meanings and technical scope, to clarify and when necessary to explain what the
20 patentee covered by the claims, for use in the determination of infringement. It is not an
21 obligatory exercise in redundancy.”)). A determination that a claim term “needs no
22 construction” or has the “plain and ordinary meaning” may be inadequate when a term
23 has more than one “ordinary” meaning or when reliance on a term’s ordinary meaning
24 does not resolve the parties’ dispute. *EON Corp. v. Silver Spring Networks*, 815 F.3d
25 1314, 1318 (Fed. Cir. 2016). Where the parties dispute the scope of a claim term, it is the
26 court’s duty to resolve the dispute. *O2 Micro Int’l Ltd. V. Beyond Innovation Tech. Co.*,
27 521 F.3d 1351, 1361-2 (Fed. Cir. 2008).

1 **B. Means-Plus-Function Claims**

2 35 U.S.C. § 112(f) provides a set of special rules for construing means-plus-
3 function claims.⁵ The statute states:

4 An element in a claim for a combination may be expressed as a means or step
5 for performing a specified function without the recital of structure, material,
6 or acts in support thereof, and such claim shall be construed to cover the
7 corresponding structure, material, or acts described in the specification and
8 equivalents thereof.

9 35 U.S.C. § 112(f). Accordingly, Section 112(f) allows a patentee to express an element
10 of a claim as a means for performing a specified function. In exchange the convenience of
11 making a functional claim, the patent seeker must pay a price in that the “patent
12 specification must disclose with sufficient particularity the corresponding structure for
13 performing the claimed function and clearly link that structure to the function.” *Triton*
14 *Tech of Texas, LLC v. Nintendo of Am., Inc.*, 753 F.3d 1375, 1378 (Fed. Cir. 2014).

15 Construing a means-plus-function claim term is a two-step process. The court must
16 first identify the claimed function. *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311
17 (Fed. Cir. 2012). Then, the court must determine what structure, if any, disclosed in the
18 specification corresponds to the claimed function. Where there are multiple claimed
19 functions, the patentee must disclose adequate corresponding structure to perform all of
20 the claimed functions. *Id.* at 1318–19. If the patentee fails to disclose adequate
21 corresponding structure, the claim is indefinite. *Id.* at 1311–12.

22 Structure disclosed in the specification qualifies as “corresponding structure” if the
23 intrinsic evidence clearly links or associates that structure to the function recited in the
24 claim. *Id.* (citing *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed. Cir.
25 1997)). Even if the specification discloses corresponding structure, the disclosure must be
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27 ⁵ The statute was previously referred to as 35 U.S.C. § 112 ¶ 6, but was codified as 112(f) in the
28 America Invents Act of 2012.

1 of “adequate” corresponding structure to achieve the claimed function. *Id.* at 1311–12
2 (citing *In re Donaldson Co.*, 16 F.3d 1189, 1195 (Fed. Cir. 1994) (en banc)). Therefore, if
3 a person of ordinary skill in the art would be unable to recognize the structure in the
4 specification and associate it with the corresponding function in the claim, a means-plus-
5 function clause is indefinite. *Id.* at 1312 (citing *AllVoice Computing PLC v. Nuance*
6 *Commc'ns, Inc.*, 504 F.3d 1236, 1241 (Fed. Cir. 2007)).

7 If the function is performed by a general purpose computer or microprocessor, then
8 the specification must also disclose the algorithm that the computer performs to
9 accomplish that function. *Nintendo*, 753 F.3d at 1378 (citing *Aristocrat Technologies v.*
10 *International Game Technology*, 521 F.3d 1328, 1333 (Fed. Cir. 2008). Failure to
11 disclose the corresponding algorithm for a computer-implemented means-plus-function
12 term renders the claim indefinite. *Id.* (citing *Ergo Licensing LLC v. Carefusion 303, Inc.*,
13 673 F.3d 1361, 1363 (Fed. Cir. 2012)).

14 It is well settled that “[s]imply disclosing software, however, ‘without providing
15 some detail about the means to accomplish the function[,] is not enough.’” *Function*
16 *Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1318 (Fed. Cir. 2013) (citing *Noah Sys.*,
17 *Inc. v. Intuit, Inc.*, 675 F.3d 1302, 1312 (Fed. Cir. 2012)). When dealing with a “special
18 purpose computer-implemented means-plus-function limitation,” the Federal Circuit
19 requires the disclosure of the algorithm for performing a function. *Noah Sys.*, 675 F.3d at
20 1312. The Federal Circuit requires that the structure disclosed in the specification, in this
21 scenario, to be “more than simply a general purpose computer or microprocessor.” *Id.*
22 The “specification can express the algorithm in any understandable terms including as a
23 mathematical formula, in prose, or as a flow chart, or in any other manner that provides
24 sufficient structure.” *Finisar Corp. v. DIRECTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed.
25 Cir. 2008) (internal citation omitted). While a patentee need not disclose details of
26 structures well known in the art, the “specification must nonetheless disclose *some*
27 structure.” *Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d
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1 1291, 1302 (Fed. Cir. 2005). Consequently, the “testimony of one of ordinary skill in the
2 art cannot supplant the total absence of structure from the specification.” *Id.* Finally, the
3 “party alleging that the specification fails to disclose sufficient corresponding structure
4 must make that showing by clear and convincing evidence.” *TecSec, Inc. v. IBM Corp.*,
5 731 F.3d 1336, 1349 (Fed. Cir. 2013).

6 **II. CLAIM CONSTRUCTION DISCUSSION⁶**

7 **A. ‘021 Patent**

8 The ‘021 Patent relates to the handover from a mobile station from a first cellular
9 system, i.e., GSM to a second cellular system, i.e., CDMA. JA7 at 1:15-28; 2:40-45. The
10 ‘021 patent provides a method by which a mobile station performs power measurements
11 of the second cellular system when the power level of the first cellular system drops below
12 a certain threshold level. JA7 at 2:52-60. To determine whether it should handover to the
13 second cellular system, the mobile station requests a “free” time period during which the
14 mobile station is “free” from the first cellular system’s transmissions. JA8 at 3:5-10.
15 During the “free” period, the mobile station is able to more accurately measure power from
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18 ⁶ For ease of reference, the Court provides basic definitions of key terms and acronyms in the field of
19 cellular radio systems. Qualcomm Opening Brief (“QOCB”) at 1-2, Apple’s Glossary of Terms,
20 provided at Technology Tutorial Hearing, Dkt. No. 361.

- 21 • Mobile stations, remote stations, access terminals, or user equipment: Cell phones such as the
22 iPhone
- 23 • Base stations or access points: Cellular towers.
- 24 • Core Network: The backbone of the network that connects to different parts of the access
25 network
- 26 • Forward Links: Cell phone downloads which occur when base stations send information to
27 mobile stations
- 28 • Reverse Links: Cell phone uploads which occur when mobile stations send information to base
stations.
- Cell: Base stations provide wireless service within a geographic area known as a cell, which
contain one or more sectors
- CDMA: Code-Division Multiple Access
- GSM: Global System for Mobile Communications
- UMTS: Universal Mobile Telecommunications System
- TDMA: Time Division Multiple Access

1 the second cellular system. JA8 at 3:10-13; JA7 at 2:5-9. Doing so reduces interference
 2 and allows the mobile station to remain connected to the first cellular system if the
 3 handover does not occur. JA11 at 10:53-55. The parties dispute three terms at issue in this
 4 patent.

5 **1. “means for comparing the measured power level with said at least**
 6 **one threshold value”**

Apple and CM Parties’ Proposed Construction	Qualcomm’s Proposed Construction
“means for comparing . . . “ term	
This is a 112 ¶ 6 claim element	
<u>Function:</u> comparing the measured power level with said at least one threshold value.	
<u>Structure:</u> This term is indefinite because there is insufficient structure disclosed in the patent for performing the claimed function.	<u>Structure:</u> control unit/control block 605 and its comparison means 616, and equivalents.

17 The parties do not dispute that this term should be construed as a means-plus-
 18 function claim pursuant to 35 U.S.C. § 112(f). Further, they do not dispute that the function
 19 is “comparing the measured power level with said at least one threshold value.”

20 Apple argues that Qualcomm has not identified adequate structure in the
 21 specification corresponding to the function. Apple asserts that Qualcomm has identified
 22 only a “black box” as the specification identifies only a generic control unit or control block
 23 for performing this “comparing function.” Qualcomm argues that the ‘021 Patent discloses
 24 sufficient structure, arguing that it is a “typical” component in a mobile station.

25 For ease of reference, Figure 6 to the ‘021 patent is reproduced below. Figure 6
 26 presents the block diagram for a terminal or a mobile station. The mobile station comprises
 27 parts that are typical of the device such as the Microphone (601), keyboard (617), antenna
 28

1 (609), and control unit (605), transmission block (604), reception block (611). The control
 2 block 605 comprises “means 616 with the aid of which it can compare the threshold values
 3 with the received signal power levels” and also comprises “advantageously means 617,
 4 with the aid of which it can request, depending on the result of the comparison, a permission
 5 from the cellular radio system to shift into the compressed transmission mode, in which
 6 the mobile station can measure also the transmission powers of a second system.” JA10 at
 7 8:10-34.

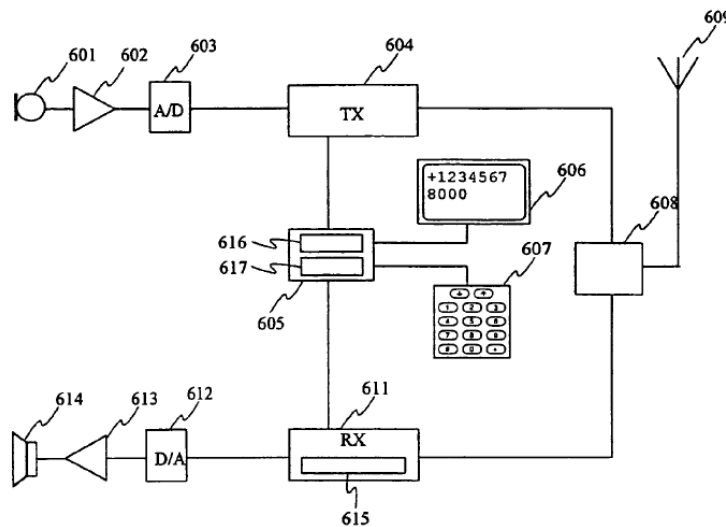


Fig. 6

18 The written description notes that control unit/block 605 comprises “means 616 and
 19 617.” JA10 at 8:23-42.⁷ The specification states that the presented means 616 can be
 20 “realized for instance with the aid of a microprocessor and software.” JA10 at 8:23-42.

21 The Court concludes that the “means for comparing the measured power level with
 22 said at least one threshold value agrees” term is indefinite as Qualcomm has failed to
 23 disclose sufficient structure and has disclosed merely a “black box.” *See Augme Techs.,*
 24 *Inc. v. Yahoo! Inc.*, 755 F.3d 1326, 1338 (Fed. Cir. 2014) (“Simply disclosing a black box
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 27 ⁷ Apple’s expert, Dr. Wicker, opines that microprocessors and software cannot accomplish the
 28 “comparing” function without specialized algorithms accomplished through specialized programming or
 additional structures. JA314 at ¶ 48.

1 that performs the recited function is not a sufficient explanation of the algorithm required
2 to render the means-plus-function term definite.”). Under federal circuit law, when an
3 inventor invokes means-plus-function claiming in a computer-implemented invention, the
4 disclosed structure must be more than simply a general purpose computer or
5 microprocessor. *See Aristocrat Techs*, 521 F.3d at 1333. The control block 605 and its
6 comparison means 616 do not constitute sufficient structure because Qualcomm has failed
7 to include a reference to an algorithm. *See Noah Sys.*, 675 F.3d at 1312 (it is well settled
8 that “[s]imply disclosing software, however, without providing some detail about the
9 means to accomplish the function is not enough”) (internal marks omitted). The patent
10 does not contain any understandable terms that could conceivably construed as an
11 algorithm, including *inter alia* as a mathematical formula, flow chart, or any other manner
12 that provides sufficient structure. *Finesar*, 523 F.3d at 1340. An inventor who chooses to
13 utilize a means-plus-function formulation must necessarily disclose adequate structure so
14 that the bounds of the invention can be perceived. *Id.* (“Without any corresponding
15 structure, one of skill simply cannot perceive the bounds of the invention.”). Notably,
16 neither Qualcomm, nor its expert Dr. Min attempts to identify how the ‘021 Patent
17 discloses any algorithm to perform the “comparing” function.

18 Qualcomm attempts to sidestep the Federal Circuit’s requirement for disclosure by
19 pointing to *Telcordia Techs. Inc. v. Cisco Sys., Inc.*, 612 F.3d 1365, 1377 (Fed. Cir. 2010).
20 In *Telcordia*, the Federal Circuit rejected an indefinite challenge where a controller’s
21 circuit was a “black box” that did not describe the “details of its inner circuitry.” 612 F.3d
22 at 1377. There, the term “monitoring means” was a 112(f) means-plus-function claim
23 where the function was “evaluating the integrity of the multiplexed subrate
24 communications on the first ring and the second ring,” and the corresponding structure for
25 the function was the “circuitry at a controller that determines if a defect exists with the
26 multiplexed subrate communications.” *Id.* at 1376. The Court concluded that the
27 specification need “only disclose adequate defining structure to render the bounds of the
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1 claim understandable to an ordinary artisan.” *Id.* Because an ordinary artisan would have
2 recognized the controller as an electronic device with a known structure, there was
3 sufficient structure to render the claim definite. *Id.* *Telcordia* is inapposite. The function
4 addressed in *Telcordia* did not require the use of specific programming through a
5 microprocessor or software sufficient to trigger the Federal Circuit’s requirement to
6 disclose an algorithm.

7 Qualcomm argues that the ‘021 patent does not require the controller to be a
8 “microprocessor or software.” Qualcomm is correct that the specification’s description of
9 comparison means 616 arises in the context of a “preferred embodiment” where it can be
10 realized “for instance with the aid of a microprocessor or software.” Pointing to a series
11 of non-binding district court cases, Qualcomm asserts that in certain situations disclosure
12 of controllers alone have been found by district courts to be sufficiently definite structure.
13 The Court finds these cases distinguishable. For example, *Maury Microwave, Inc. v. Focus*
14 *Microwaves, Inc.*, 2012 WL 9161988, at *20 (C.D. Cal. July 30, 2012) is inapposite
15 because there the specification did not clearly mandate a computer algorithm to perform
16 the function. Here, the extrinsic evidence, discussed below, shows that an algorithm or
17 additional structure is necessary for control block 605 and comparison means 616 to
18 perform the comparing function. Moreover, unlike in *Goss Intern. Americas, Inc. v.*
19 *Graphic Management Associates, Inc.*, 739 F. Supp. 2d 1089, 1100 (N.D. Ill. 2010), there
20 is no indication that the 605 control block “consist[s] of only circuitry” that does not “even
21 require any algorithms at all” to perform the requisite function.⁸ Consequently, these cases
22 are inapposite because the structure disclosed here requires *both* a control block 605 *and* a
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24 ⁸ Similarly, the Court does not find *Technologies Properties, Ltd. v. Canon, Inc.*, 2015 WL 5535830, at
25 *4-6 (N.D. Cal. Sep. 18, 2015) persuasive. There, the Court distinguished *Aristocrat* because there was
26 no argument that a microprocessor was not necessary to “accomplish the recited functions,” leading the
27 Court to find that “[t]he holding from *Aristocrat* requiring disclosure of an algorithm does not extend to
28 a function that can be performed by an integrated circuit or chip.” Here, the extrinsic evidence,
uncontested by Qualcomm’s expert Dr. Min, shows that an algorithm would be required to perform the
comparing function.

1 comparison means 616. According to the extrinsic evidence and a reading of a “preferred
2 embodiment,” comparison means 616 would likely require either a microprocessor or
3 software to perform the function.

4 The Court’s conclusion is informed by the extrinsic evidence and particularly credits
5 the Declaration of Apple’s expert Dr. Wicker. Dr. Wicker contends that microprocessors
6 and software are incapable of accomplishing the “comparing” function without specific
7 algorithms. JA314 ¶ 48 (concluding that “control block 605” as described in the ‘021
8 Patent is a “Black Box” that is not a “sufficient explanation of any algorithm.”).⁹ Wicker
9 states that “no generic hardware or software by itself can accomplish the different functions
10 of the control unit or control block recited in the patent. In fact, specialized programming
11 and/or additional structural features are required to perform the identified functions.
12 JA314. In its Responsive Claim Construction Brief, Qualcomm contends for the first time
13 that the recited function involves merely comparing two values, which “can be achieved
14 by any general purpose computer without special programming.” QRCB at 3 (citing *In re*
15 *Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011)).

16 Pertinently, Qualcomm does not present any extrinsic evidence to rebut Dr. Wicker’s
17 claims that a POSITA would understand that the recited function cannot be accomplished
18 by the 605 controller block and comparison means 616 without specific algorithms.
19 Notably, Dr. Min *never* states that the comparing function can be accomplished without a
20 specific algorithm. The Court will accordingly conclude that *Katz* is inapposite¹⁰ and will
21 accept Dr. Wicker’s contention that the “comparing” function requires the use of
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23 ⁹ Qualcomm challenges Dr. Wicker’s lack of “supporting citations.” QOCB at 9. In his deposition, Dr.
24 Wicker explained that this was because he was citing to an absence in a written description and that
25 these assertions are based on his “experience as a telecom engineer for 30-something years.” QEX17 at
26 75:1-25; 78:1-7

27 ¹⁰ In *Katz*, the patentee did not claim a specific function performed by a special purpose computer, but
28 merely recited claimed functions of “processing,” “receiving,” and “storing” that could have been
achieved by any general purpose computer without special programming. *See Katz*, 639 F.3d at 1313.
Here, Apple’s un rebutted expert testimony is that the comparing function requires specialized
programming. *See JA 314.*

1 specialized programming, i.e. algorithms.

2 Dr. Min asserts only that control unit/control block 605 is sufficient to perform the
3 claimed function because the structure of mobile station controllers was well known to
4 persons of ordinary skill in the art. JA397 ¶¶ 89-92. Dr. Min cites common block 605-
5 type processors such as GSM & W-CDMA baseband processors and GSM digital base-
6 band chip.¹¹ Whether the 605 block was a “typical” structure in a mobile device does not
7 automatically lead to the legal determination of adequate structure to support a means-plus-
8 function claim, particularly in light of the Federal Circuit’s case law requiring the
9 disclosure of algorithms for computer-implemented functions. Given the total absence of
10 structure, the Court need not and will not consider Dr. Min’s conclusory statements. *See*
11 *Citrix*, 792 F.3d at 1354 (“The testimony of one of ordinary skill in the art cannot supplant
12 the total absence of structure from the specification.”). This is consistent with the rationale
13 of 112(f) claims. *Williamson*, 792 F.3d at 1354 (“The prohibition against using expert
14 testimony to create structure where none otherwise exists is a direct consequence of the
15 requirement that the specification adequately disclose corresponding structure.”)

16 Accordingly, the Court concludes that this term is indefinite because the ‘020 patent
17 fails to disclose adequate structure corresponding to the “comparing” function. *See id.*

Apple and CM Parties’ Proposed Construction	Qualcomm’s Proposed Construction
“means for transmitting . . . “ term	
This is a 112 ¶ 6 claim element	
<u>Function:</u> transmitting to the first cellular radio system a request for a free	<u>Function:</u> transmitting to the first cellular radio system a request for a free

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¹¹ The Court agrees with Apple that Dr. Min’s assertions appear to argue enablement. The Court emphasizes that the indefiniteness inquiry is “concerned with whether the bounds of the invention are sufficiently demarcated, not with whether one of ordinary skill in the art may find a way to practice the invention.” *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 519 (Fed. Cir. 2012).

<p>1 time period in which to perform the 2 measurement only after said 3 measured power level remains 4 below said at least one threshold 5 value.</p>	<p>time period in which to perform the measurement.</p>
<p>7 <u>Structure:</u> This term is indefinite because 8 there is insufficient structure 9 disclosed in the patent for 10 performing the claimed function.</p>	<p><u>Structure:</u> transmitter block 604 and equivalents.</p>

11 **1. “means for transmitting to the first cellular radio system a**
12 **request for a free time period in which to perform the**
13 **measurement, said means being arranged to transmit the**
14 **request for the free time period in which to perform the**
15 **measurement only after said measured power level remains**
16 **below said at least one threshold value”**

17 The parties agree that this “transmitting” term is a 112 ¶ 6 claim element.

18 a) **Function**

19 The parties disagree as to whether the function requires that the transmitting be
20 performed “*only after said measured power level remains below said at least one*
21 *threshold value.*” AOCB at 6.

22 Apple contends that the plain language of the term requires that the function
23 include the “only after said measured power level remains below said at least one
24 threshold value” limitation. Qualcomm argues that Apple has incorporated a different
25 claim term into their proposed construction—“said means being arranged to transmit the
26 request for the free time period in which to perform the measurement only after said
27

1 measured power level remains below said at least one threshold value.” JA11 at 10:41-
2 46.

3 When construing functional claims under § 112(f), “[t]he statute does not permit
4 limitation of a means-plus-function claim by adopting a function different from that
5 explicitly recited in the claim.” *In re Teles AG Informationstechnologien*, 747 F.3d 1357,
6 1367-68 (Fed. Cir. 2014) (citing *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d
7 1250, 1258 (Fed. Cir. 1999) (“[T]he district court erred . . . by incorporating unrecited
8 functional limitations into the claims.”)). An “error in identification of the function can
9 improperly alter the identification of structure in the specification corresponding to that
10 function.” *Micro Chem.*, 194 F.3d at 1258. Notably, “[t]hat part of a claim contains
11 means-plus-function language does not make section 112 ¶ 6 applicable to the entirety of
12 the claim.” *Johnston v. IVAC Corp.*, 885 F.2d 1574, 1580 (Fed. Cir. 1989).

13 The Court concludes that “said means being arranged to transmit the request for
14 the free time period in which to perform the measurement only after said measured power
15 level remains below said at least one threshold value” is a *separate* claim term that is not
16 a part of the instant means-plus-function term. *See Bausch & Lomb Inc. v. Moria S.A.*,
17 222 F. Supp. 2d 616, 655-56 (E.D. Pa. 2002) (construing function to be merely “retains
18 and positions the eye on which cutting of the cornea is to be performed” where claim
19 language stated “means for retaining and positioning the eye on which cutting of the
20 cornea is to be performed, *said means* being capable of temporary attachment to a portion
21 of the eye surrounding the cornea being capable of exposing and presenting the cornea to
22 be cut.”) (emphasis added). The Court agrees with Qualcomm that Apple is attempting to
23 import a separate limitation in an attempt to shoehorn controller block 605 as required
24 structure. In particular, the Court credits Qualcomm’s argument that the “said means
25 *being arranged*” term is a separate limitation describing when the function occurs, and
26 does not constitute a description of the function itself.

1 The Court is not persuaded by Apple’s citation to the prosecution history. As
2 originally drafted, the patentee stated “means (617) for requesting a free measurement
3 period from the first cellular radio system, which means are arranged to request the free
4 measurement period when said measured signal strength is lower than said threshold
5 value.” AEX 30 at 101. After a rejection from the PTO, the patentee amended as follows
6 (additions in underline, deletions in ~~striketrough~~):

- 7 • means ~~(617)~~ for transmitting to the first cellular radio system a requesting request
8 for a free time period in which to perform the measurement period from the first
9 cellular radio system, which said means are being arranged to transmit the request
10 for the free time period in which to perform the measurement period when said
11 measured signal strength power level remains lower than below said at least one
12 threshold value [[,]] . . .

13 AEX30 at 109. It is not clear to the Court how the prosecution history “disclaim[s] or
14 “disavow[s]” Qualcomm’s assertion that the transmitting function should not include the
15 second post-comma clause. *See Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313,
16 1326 (Fed. Cir. 2002). Even as originally drafted, the original phrasing contained an
17 explicit second clause—“radio system, *which means are arranged*” that would not have
18 served as a limitation on the means-plus-function claim asserted in the first clause of the
19 claim.

20 Accordingly, the Court concludes that the function for this term is “transmitting to
21 the first cellular radio system a request for a free time period in which to perform the
22 measurement.”

23 b) Structure

24 Apple argues that “transmitter block 604” cannot send the recited transmissions
25 without “control block 605” which determines when to transmit the request by checking
26 whether the power level remains below a threshold value. Accordingly, Apple contends
27

1 that the corresponding structure for “means for transmitting” necessarily includes
2 “control block 605,” which Apple argues is a black box indefinite term.

3 Qualcomm responds that transmitter block 604 is adequate structure as it follows
4 directly from the Patent’s description as performing the recited function. Transmission
5 block 604 “process[es], modulate[s], and amplifie[s]” transmission signals JA10 at 8:2-5.
6 Qualcomm asserts Apple’s construction of function—which includes the limitation “only
7 after said measured power level remains below said at least one threshold value,” leads to
8 the erroneous inference that Control Block 605—not merely transmission block 604—is
9 a necessary part of this term’s structure.

10 Because the Court has construed the function of this term to *not* require the
11 separate claim limitation “said means being arranged to transmit the request for the free
12 time period in which to perform the measurement only after said measured power level
13 remains below said at least one threshold value,” the Court cannot conclude that control
14 block 605 is a requisite structure for the identified function. Here, control block 605 is
15 not necessary for the function of “transmitting to the first cellular radio system a request
16 for a free time period in which to perform the measurement.” Accordingly, the Court
17 concludes that Qualcomm’s disclosure of transmitter block 604 and equivalents is
18 sufficiently definite structure. *See* JA397-398 (Declaration of Dr. Min asserting that a
19 POSITA would understand transmitter block 604 to be adequate corresponding structure
20 for the transmitting function).

2. “means for measuring a power level of a signal transmitted by at least one base station of the first cellular radio system” and “means for receiving at least one threshold value transmitted to the terminal by the first cellular radio system

Apple and CM Parties’ Proposed Construction	Qualcomm’s Proposed Construction
“means for measuring . . . “ term	
This is a 112 ¶ 6 claim element	
<u>Function:</u> measuring a power level of a signal transmitted by at least one base station of the first cellular radio system	
<u>Structure:</u> the CDMA or TDMA cellular radio system receiver block 611 described in 7:57–8:45.	<u>Structure:</u> power level determination means 615 of receiver block 611, and equivalents.
“means for receiving . . . “ term	
This is a 112 ¶ 6 claim element	
<u>Function:</u> receiving at least one threshold value transmitted to the terminal by the first cellular radio system.	
<u>Structure:</u> the CDMA or TDMA cellular radio system receiver block 611 described in 7:57–8:45.	<u>Structure:</u> receiver block 611 and equivalents.

The parties do not dispute that these terms should be construed as means-plus-function claims. They agree on the respective functions for each term. Instead, the parties dispute whether the structure for each term—which the parties agree involve receiver block 611—is limited to the CDMA or TDMA cellular radio systems disclosed in the ‘021 patent at lines 7:57 to 8:45.

1 Apple argues that the '021 patent discloses both the measuring and receiving
2 functions, but does not provide any detail regarding the structure of receiver block 611 or
3 its implementation. AOCB at 8. According to Apple, the only networks described in the
4 '021 patent are CDMA or TDMA type systems, and thus the structure must be limited to
5 these networks. Importantly, Apple's theory would exclude OFDMA systems such as
6 LTE. *Id.* Apple's expert Dr. Wicker asserts that specialized programming and additional
7 features would be required to perform LTE functions, which are distinct from those for a
8 UMTS receiver. JA311 ¶ 41.

9 Qualcomm responds that nothing in the plain language of the '021 patent limits the
10 611 receiver block to only CDMA or TDMA radio systems. QOCB at 4. Qualcomm
11 asserts that any references to particular cellular systems are qualified by "exemplary
12 description" language. QOCB at 4-6.

13 The Court agrees with Qualcomm. Nothing in the specification indicates that the
14 structure should be restricted to only CDMA or TDMA systems. The '021 Patent describes
15 the 611 receiver block without any reference to particular cell systems. *See* JA10 at 7:63-
16 67. Indeed, the "Background of the Invention" accounts for the development of a new type
17 of cellular system, such as the OFDMA based systems that underlie modern-day LTE
18 networks. *See* JA7 at 1:25-40 ("New network topologies will rise in parallel with [the
19 GSM] network, and typically the utilization of these new topologies require new terminals.
20 In the future it must be possible to use the terminals in a number of networks. Then a
21 change over from the use of a first network to the use of a second network must be effected
22 without problems."). Descriptions of the '021 patent referencing particular cellular
23 systems are qualified by exemplary description language. *See, e.g.,* JA9 at 5:40-46 ("[F]or
24 instance, in a situation where said first network is a WCDMA network and said second
25 network is a GSM 900 network . . ."). Finally, claims 8-11 indicate specific cellular
26 systems, while claim 12 does not, indicating that the patentee did not intend to so restrict
27 claim 12 to CDMA or TDMA systems. JA11 at 10:8-11; *see Unwired Planet, LLC v. Apple*

1 *Inc.*, 829 F.3d 1353, 1359 (Fed. Cir. 2016) (“If the patentee intended to restrict the claims-
2 at-issue to require a [specific cellular system], it could have included that same
3 limitation.”).

4 Accordingly, the Court will decline to impose a “CDMA or TDMA” limitation into
5 the structure of these terms and will construe the structures as “power level determination
6 means 615 of receiver block 611, and equivalents” and “receiver block 611 and
7 equivalents” respectively. The disclosed structure is *receiver block 611*, not a CDMA
8 receiver block or a TDMA receiver block. To construe the term otherwise would be against
9 the larger purpose of the patent—to ensure interoperability between different types of
10 cellular networks.

11 B. ‘630 Patent

12 **1. means for performing: a core network-specific authentication**
13 **protocol; a radio bearer-specific ciphering process; generation, for each**
14 **ciphering process, a count parameter comprising a cyclical sequence**
15 **number and a hyperframe number which is incremented each time the**
16 **cyclical sequence number completes one cycle; and for each core**
17 **network or authentication protocol: initialization of a first radio bearer**
18 **of a session with a hyperframe number exceeding the highest**
19 **hyperframe number used during the previous session, and to send a**
20 **radio network controller a value for enabling the radio network**
21 **controller to determine the same hyperframe number; and at the end of**
22 **a session, storing at least part of the highest hyperframe number used**
23 **during the session.**

24 The ‘630 patent describes methods and devices for protecting and maintaining the
25 integrity of the traffic in a cell network connected to two core networks—i.e., one core
26 network for data and another for voice calls. JA13 at Abstract. In particular, this patent
27 addresses a security problem associated with using a single “count parameter” and
28

1 problems with reusing a hyperframe number (“HFN”), an input to a ciphering algorithm.
 2 *Id.* While prior art used only a single HFN Count-C number that increased no matter
 3 whether the input key was for voice or data, the ‘630 Patent discloses a new system utilizing
 4 a separate HFN for voice and core networks. JA16-17 at 1:48-4:6. By doing so, this
 5 method avoids the possibility of HFN repetition. Ultimately, the ‘630 patent discloses a
 6 method to increment the counter across all radio bearers such that each new radio bearer
 7 starts with an HFN higher than any HFN used by any radio bearer in a previous session.
 8 JA13 at Abstract.

9 Apple and CM Parties’ Proposed 10 Construction	Qualcomm’s Proposed Construction
11 “means for performing . . .”	
12 This is a 112 ¶ 6 claim element	
13 <u>Function:</u> “performing (1) a core network-specific authentication protocol; (2) a radio 14 bearer-specific ciphering process; (3) generation, for each ciphering process, a count 15 parameter comprising a cyclical sequence number and a hyperframe number which is 16 incremented each time the cyclical sequence number completes one cycle; (4) for each 17 core network or authentication protocol: (4a) initialization of a first radio bearer of a 18 session with a hyperframe number exceeding the highest hyperframe number used 19 during the previous session, (4b) sending a radio network controller a value for 20 enabling the radio network controller to determine the same hyperframe number; and 21 (4c) at the end of a session, storing at least part of the highest hyperframe number used 22 during the session.”	
23 <u>Structure:</u> This term is indefinite because 24 there is no single structure that performs 25 the claimed function.	23 <u>Structure:</u> mobile station having a 24 memory, and equivalent

1 The bank computer is not linked in the claim as the ‘means’ for generating an
2 authorization indicia. Rather, the bank computer is recited as ‘including’ those
3 means. NMI’s argument that the first bank computer constitutes sufficient
4 structure would require the first bank computer to include a first bank
5 computer, which is both redundant and illogical. Because the claimed
6 generating means is a subset of the bank computer, there must be a recitation
7 of structure that is a component of the bank computer . . . to rebut the
8 presumption.

9 *Id.* at 1366. Accordingly, under the teachings of *Net MoneyIn*, a construction such as that
10 in this case—“wherein the mobile station comprises means for performing [the six-part
11 function]—would similarly require the mobile station to include a mobile station, which
12 the Federal Circuit has suggested is “redundant and illogical.” *See id.*

13 Qualcomm’s citation to *HTC Corp. v. IPCOM GmbH & Co.*, 667 F.3d 1270 (Fed.
14 Cir. 2012) to argue that a “mobile station with memory” is sufficient structure is not only
15 inapposite, but arguably is supportive of Apple’s position that this claim lacks sufficient
16 structure. In *HTC*, the Federal Circuit found that “[a]lthough the specification here does
17 not literally disclose a processor and receiver, a person skilled in the art would understand
18 that the mobile device would have to contain a processor and a transceiver.” *Id.* at 1279.
19 Pertinently, the *HTC* Court did not find that a “mobile station” was sufficient structure for
20 the claimed function of “arrangement for reactivating,” but rather found that a processor
21 and transceiver *within* the mobile device could set forth sufficient structure for the claimed
22 function. Unlike in *HTC* where a person of ordinary skill in the art was able to identify
23 that a mobile station usually included a processor and transceiver, here neither Qualcomm,
24 nor its expert Dr. Min has not identified the analogous equivalent of components, such as
25 the processor and transceiver, required to perform the six-part function in the ‘630 patent.
26 Dr. Min concedes that the ‘630 patent describes a “mobile station itself, not any particular
27 component within it.” AEX 16 at 91:13-24. Moreover, Dr. Min stated that the USIM
28

1 memory chip could not perform the six-part ciphering process by itself. *Id.* at 93:19-21.
2 Accordingly, Qualcomm has not disclosed any structure can perform each of the functions
3 described above. *See Williamson*, 792 F.3d at 1352 (“Where there are multiple claimed
4 functions, as we have here, the patentee must disclose adequate corresponding structure to
5 perform all of the claimed functions. If the patentee fails to disclose adequate
6 corresponding structure, the claim is indefinite.”) (internal citations omitted). Moreover,
7 the Court affords minimal weight to Dr. Min’s reference to the 3GPP standard¹² dated after
8 the ‘630 patent as extrinsic evidence “cannot supplant the total absence of structure from
9 the specification.” *See Williamson*, 792 F.3d at 1354.

10 Finally, Qualcomm’s cited structure is indefinite for a further reason cited in *HTC*.
11 To the extent that the mobile station performs the six-part function by means of a processor,
12 *HTC* teaches that general purpose processors would not be sufficient structure. *See id.* at
13 1280. Rather, Federal Circuit precedent requires the identification of an algorithm
14 executed by the processor and transceiver.¹³ Here, Qualcomm has not identified any
15 algorithm disclosed in the specification of the ‘630 patent.

16 Accordingly, the Court concludes that this claim is indefinite for failing to
17 adequately disclose components of the mobile station and algorithms executed by those
18 components that could perform the six-part function recited in the claim.

19 C. ‘549 Patent

20 The ‘549 patent describes a mobile station that adjusts its transmission rate based
21 on information it obtains from multiple base stations indicating whether they have
22 available capacity to receive data on reverse links. JA21 at Abstract. The base stations
23 send “reverse link busy bits,” a term construed below, to the mobile station to indicate
24

25 ¹² The Court agrees with Apple that this evidence is irrelevant insofar as a court construing patent claims
26 must accord a claim the meaning it would have to a POSITA “at the time of the invention.”
Innova/Pure Water, Inc., 381 F.3d at 1116.

27 ¹³ In *HTC*, the Federal Circuit did not weigh in on whether or not an algorithm was sufficiently disclosed
28 as the Federal Circuit found that HTC had waived the argument by failing to ask the district court to
address this issue. *See HTC*, 667 F.3d at 1280-83.

1 whether or not the base station has reached its capacity limit. *Id.* Reverse link busy bits
 2 are independently generated by each base station and indicate whether the transmitting
 3 base station has reached a reverse link capacity limit. *Id.*

4 The parties dispute two issues with the ‘549 patent: (1) whether the entirety of the
 5 claim 1 preamble is a limitation and (2) the meaning of “reverse link busy bit.”

6 **1. Preamble**

Apple and CM Parties’ Proposed Construction	Qualcomm’s Proposed Construction
Preamble of Claim 1	
Preamble is limiting	<p>The Court does not need to construe the entire preamble.</p> <p>In a communication system in which <u>each base station in communication with a remote station transmits a reverse link busy bit</u> indicating whether its reverse link capacity has been exhausted, a method of determining <u>the reverse link transmission rate of said remote station</u> comprising:</p> <p><u>Underline:</u> Qualcomm concedes these terms provide antecedent basis for terms in the body of claim 1</p> <p>Bold: Qualcomm contends these aspects of the preamble need not be a limitation</p>

1 A preamble can limit the scope of a claim where it “recites essential structure or
2 steps, or if it is ‘necessary to give life, meaning, and vitality’ to the claim. *Catalina*
3 *Mktg. In’l Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). A preamble
4 is not limiting “where a patentee defines a structurally complete invention in the claim
5 body and uses the preamble only to state a purpose or intended use for the invention.” *Id.*
6 Whether to treat a preamble as a claim limitation is “determined on the facts of each case
7 in light of the claim as a whole and the invention described in the patent.” *Bicon, Inc. v.*
8 *Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006).

9 The preamble of claim 1 states:

10 In a communication system in which each base station in communication
11 with a remote station transmits a reverse link busy bit indicating whether its
12 reverse link capacity has been exhausted, a method of determining the
13 reverse link transmission rate of said remote station comprising:

14 JA37 at 11:63-67.

15 Apple argues that the entire preamble should be construed as a limitation. AOCB
16 14. According to Apple, phrases in the preamble such as “indicating whether its reverse
17 link capacity has been exhausted,” and “each base station in communication with a
18 remote station” exceeds more than a mere description of the intended use of the
19 invention. The preamble defines a limitation by stating that *each* base station *in*
20 *communication with the remote station* sends a reverse link busy bit to the remote station.
21 Moreover, Apple contends that later limitations lack antecedent basis, including that
22 “base stations” appears in the body of claim 1, and the use of “said” in the body relies on
23 the “base stations” defined in the preamble.

24 In its opening brief, Qualcomm concedes two phrases in the preamble are
25 limitations: (1) “each base station in communication with a remote station transmitting a
26 reverse link busy bit” and (2) “the reverse link transmission rate.” QOCB at 19
27 (conceding these aspects of the preamble provide antecedent basis for certain limitations
28

1 recited in the body of the claim). Nonetheless, Qualcomm contends that even when a
2 preamble provides antecedent basis that “does not necessarily convert the entire preamble
3 into a limitation.” *Id.* (citing *TomTom Inc. v. Adolph*, 790 F.3d 1315, 1322-24 (Fed. Cir.
4 2015). As such, Qualcomm contends that the remaining terms in the preamble provide a
5 “statement of purpose” for the claim, and are not limitations. These terms would
6 necessarily include:

- 7 • “In a communication system in which”
- 8 • “indicating whether its reverse link capacity has been exhausted,”
- 9 • “a method of determining”
- 10 • “of said remote station”

11 *Both* parties cite the “indicating whether its reverse link capacity has been
12 exhausted” language in their interpretation of “reverse link busy bit” below. Given the
13 importance of the “indicating whether its reverse link capacity has been exhausted”
14 language in the construction of “reverse link busy bit,” the Court concludes that this
15 preamble language is necessary to give “life, meaning, and vitality” to the claim by
16 providing a critical definitional limitation of what constitutes a reverse link busy bit. *See*
17 *Catalina Mktg. In’l Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002).

18 By construing this phrase as a limitation, the vast majority of the preamble has
19 either been conceded by Qualcomm to be a limitation or construed by the Court to be a
20 limitation. Accordingly, the Court concludes that the entire preamble is a limitation as
21 that the preamble cannot be parsed into limiting and non-limiting portions. *See Blue*
22 *Calypso, Inc. v. Groupon, Inc.*, 93 F. Supp. 3d 575, 594 (E.D. Tex. 2015).

1 stations, the specification states:

2 It should be noted that the power control commands from different base
3 stations may have different values and so cannot be combined meaningfully.

4 That is base station 102 may have exhausted its reverse link capacity while
5 base station 104 may still have remaining reverse link capacity, and as such
6 would transmit reverse link busy bits having different values.

7 JA33 at 4:50-56. Qualcomm argues that this embodiment makes clear that exhausted
8 means reaching a capacity limit. QOCB at 21. Apple, on the contrary, asserts that this
9 statement contrasts an “exhausted” reverse link capacity with one that has remaining
10 capacity. AOCB at 16. Apple contends that the patent teaches that the busy “bit” may
11 only have one of two values, either “0” or “1”, indicating that there is one value indicating
12 the base station has “exhausted” its reverse link capacity and “another value indicating the
13 base station ha[s] remaining reverse link capacity.” *Id.* (citing JA35 at 7:16-17).

14 Apple’s construction fails to take into account that Qualcomm’s construction is not
15 antithetical to the premise that the “bit” value would be zero so long as the base station had
16 “exhausted” its reverse link capacity. Qualcomm’s construction effectively defines
17 “exhausted” as a condition when the base station reaches its “reverse link capacity *limit*.”
18 Under Qualcomm’s construction, the bit value would be “0” when the base station reaches
19 a reverse link capacity *limit*, and would be “1” when it has not. Pertinently, the difference
20 is that a reverse capacity limit could be reached while the base station still has *some* reverse
21 link capacity. As such, a reverse link capacity *limit* need not have “no remaining capacity.”
22 Accordingly, Apple’s citation to this part of the specification does not support the “has no
23 remaining capacity” definition of “exhausted.” Moreover, the Court agrees that
24 Qualcomm’s construction is more accurately derived from the specification and stays “true
25 to the claim language.” *See In re Papst Licensing Digital Camera Patent Litigation*, 778
26 F.3d 1255, 1261 (Fed. Cir. 2015).

27 Qualcomm supports its construction by reference to the specification’s repeated
28

1 statements that a reverse link busy bit indicates when a base station has reached a “reverse
2 link capacity limit.” The Court agrees that this weighs greatly in favor of Qualcomm’s
3 construction. Statements throughout the specification compel the conclusion that a reverse
4 link busy bit indicates whether a link has reached its “capacity limit.” *See, e.g.*, JA32 at
5 2:40-44 (stating that for an exemplary embodiment reverse link busy bits are . . . “indicative
6 of whether the transmitting base station has reached a reverse link capacity limit.”); *id.* at
7 2:24-27 (“The reverse link busy bit indicates when the base station has reached its reverse
8 link capacity limit.”); JA21 at Abstract (“Reverse link busy bits are independently
9 generated by each base station and indicative of whether the transmitting base station has
10 reached a reverse link capacity limit.”); *id.* (remote station, in a first exemplary
11 embodiment, transmits a reverse link signal only when all of the reverse link busy bits
12 indicate that the base stations in the remote stations Active Set *have reverse link capacity*);
13 4:19-21 (“The reverse link busy bits indicate that the *reverse link capacity limit* of the base
14 station has been reached”); JA34 at 6:43-47 (rate determination element 510 inhibits
15 transmission of the reverse link signal when any of the busy bits from a base station in the
16 Active Set *indicate that the reverse link capacity limit* for that base station has been
17 reached).

18 Accordingly, Qualcomm’s intrinsic evidence strongly supports a construction that a
19 reverse link busy bit indicates whether the transmitting base station has reached a “reverse
20 link capacity limit.” Further, it supports a construction that “exhausted” in the context of
21 claim 1 of the ‘541 patent means reaching a “reverse link capacity limit.”

22 c) **Extrinsic Evidence**

23 Apple contends that the ordinary meaning of exhausted means that capacity is
24 “exhausted” when there is no remaining capacity. *See* AEX19 at 29 (Webster’s II New
25 College Dictionary defining “exhaust” as “to use up” or wear out completely.”); AEX21 at
26 36 (defining “exhaust” as “consume or use up the whole of”). Qualcomm, relying
27 exclusively on intrinsic evidence, contends that Apple’s extrinsic evidence is not relevant
28

1 in comparison to the definitions provided in the specification and claim language.

2 The Court agrees with Qualcomm. In light of the strength of the intrinsic evidence,
3 Apple's citations to extrinsic evidence should be afforded minimal weight. *See Novartis*
4 *Pharm. Corp. v. Abbott Labs.*, 375 F.3d 1328, 1335 (Fed. Cir. 2004) (extrinsic evidence
5 may not "be used to vary, contradict, expand, or limit the claim language from how it is
6 defined, even by implication, in the specification."). The Court makes a further
7 observation—not all dictionary definitions conclusively support Apple's "consume
8 entirely" or "use up entirely" construction. For example, Merriam Webster's Collegiate
9 Dictionary Eleventh Edition (2003) provides alternative definitions of "exhaust," including
10 "to tire *extremely* or completely" and "to deprive of a valuable quality or constituent."¹⁴
11 Such a definition would necessarily indicate that "exhausted" could mean to use up *almost*
12 entirely.

13 Apple's expert Jonathan Wells, PhD submitted a declaration that largely repeats and
14 is duplicative of the arguments made in Apple's opening and responsive claim construction
15 briefing. The Court accordingly affords little weight to the Wells Declaration regarding
16 this patent. *See* JA260-264. However, the Court does find salient the fact that Dr. Wells
17 conceded in his deposition that the '549 patent did not expressly define "exhausted" as "no
18 remaining capacity." *See* QEX20 at 77:4-78:16.

19 d) Court's Construction

20 Based on the above reasoning, the patent's claim language, the specification, and the
21 extrinsic evidence, the Court will construe the term "reverse link busy bit" to mean
22 "information sent by a base station indicating whether its reverse link capacity has been
23 exhausted, i.e., whether it has reached a reverse link capacity limit." By doing so, the Court
24 makes clear that the primary basis of the construction derives from claim 1's "exhausted"

26 ¹⁴ The Court observes that the modern Merriam-Webster online dictionary defines "exhausted," to mean
27 "completely *or almost completely* depleted of resources or contents." *See Merriam-Webster*, available
28 at <https://www.merriam-webster.com/dictionary/exhausted>.

1 language, while recognizing that the entirety of the patent, particularly language in the
 2 specification and in another claim, suggests that “exhausted” means reaching a “reverse
 3 link capacity limit.” *See Philips*, 415 F.3d at 1314 (“Because claim terms are normally
 4 used consistently throughout the patent, the usage of a term in one claim can often
 5 illuminate the meaning of the same term in other claims.”); *id.* at 1315 (stating that usually
 6 the specification is “dispositive; it is the single best guide to the meaning of a disputed
 7 term.”).

8 **D. ‘822 Patent**

9 The ‘822 patent is an improvement in the acknowledgment process for a base station
 10 to grant access to a mobile station, by using location information to reduce the required
 11 power to send acknowledgment messages. JA50 at Abstract. Prior to this invention, a
 12 mobile station would send a preamble sequence to a base station, which would respond by
 13 sending an acknowledgment message—at full power because the base station is unaware
 14 of the mobile station’s location—back to the mobile station. JA70 at 2:4-14. The ‘822
 15 patent overcomes the issue by dividing the preamble sequences into multiple sets based on
 16 different channel qualities. JA70 at 2:18-23. The channel quality is estimated based on a
 17 “metric of forward link geometry.” *Id.* at 2:36-30. The parties dispute the construction of
 18 this term.

19 **1. “metric of forward link geometry”**

Apple and CM Parties’ Proposed Construction	Qualcomm’s Proposed Construction
“metric of forward link geometry”	
Measure that utilizes observed power and noise on a forward link	A measurement of one or more characteristics of a signal indicating the quality of the forward link channel

1 a) **Claim Language**

2 Claim 12 recites an apparatus comprising: “a processor configured to determine a
3 metric of forward link geometry as a function of an observed transmission, wherein said
4 observed transmission is selected from a group consisting of pilot signals, noise, and traffic
5 on data channels, or any combination thereof, and to determine an estimate of channel
6 quality as a function of at least the metric of the observed transmission.” JA75 at 12:8-17.

7 The parties agree that a “metric of forward link geometry” is a measurement of the
8 forward link channel, but dispute whether the measurement is “based on one or more
9 characteristics of the signal” (Qualcomm) or whether the measurement must always use
10 “power and noise.” (Apple).

11 Qualcomm emphasizes the claim language, defining an “observed transmission” as
12 “selected from a group consisting of **pilot signals, noise, and traffic** on data channels, **or**
13 any combination thereof.” JA75 at 12:13-15. To Qualcomm, the use of the disjunctive
14 “or” demonstrates that the metric of forward link geometry *may*, but does not always
15 *require* both power and noise. Apple, in contrast, cites the “observed transmission” claim
16 language to argue that nothing in this claim states that “forward link geometry” can be
17 calculated *without* noise.

18 Apple’s argument is a distortion of the plain language of the claim, which clearly
19 indicates that pilot signals [power], noise, and traffic on data channels, “or any combination
20 thereof” could be considered in the metric of forward link geometry. Accordingly, the
21 plain language of the claim language *does not* support Apple’s construction limiting the
22 construction to require both “power and noise.” Nonetheless, the plain language of the
23 claim also does not support Qualcomm’s overly broad construction requiring only a
24 “measurement of one or more characteristics of a signal.” The Court turns to the
25 specification.

26 b) **Specification**

27 In support of its argument that “forward link geometry” is unambiguously defined
28

1 to require both power and noise, Apple points to an embodiment in the specification, which
2 states:

3 In an embodiment, observations of forward link geometry are used. For
4 example, metrics such as C/I , where C is the received pilot power and I is the
5 observed noise, may be used. Also $C/(C+I)$ may be used. In other words,
6 some measure that utilizes observed signal *power and noise* is used.

7 JA 72 at 6:54-59 (emphasis added). According to Apple, this specification language
8 teaches that *only* power and noise may be used as the requisite metrics of forward
9 link geometry. The Court disagrees. That a single embodiment requires both power
10 and noise as the requisite metric does not mean that that all embodiments of this
11 patent must necessarily also require power and noise. *See Williamson*, 792 F.3d at
12 1346-47 (cautioning against “limiting the claimed invention to preferred
13 embodiments or specific examples in the specification.”).

14 Qualcomm, meanwhile, points to several points in the specification where the ‘822
15 Patent teaches that the metric of forward link geometry may be determined “as a function
16 of observed pilot signals, noise, *and/or* traffic on data channels.” JA70 at 2:35-37. *See*
17 *also* JA72 at 6:61-7:3 (“For example, Region R_1 defines a Region having CQI values
18 corresponding to power and/or noise levels greater than P_1 .”). Qualcomm argues that this
19 language *can*, but does not require the use of power and noise, as “and/or” indicates two
20 or more alternatives. The Court agrees with Qualcomm’s construction insofar as the case
21 law clearly indicates that the use of “and/or” indicates two or more alternatives that may
22 be taken together or individually. *See Cipher Pharms. Inc. v. Actavis Labs. FL, Inc.*, 99 F.
23 Supp. 3d 508, 518 (D.N.J. 2015) (“and/or” is a function word to indicate that “two words
24 or expressions are to be taken together or individually.”).

25 The specification, accordingly, makes clear that signal power and noise are
26 unquestionably aspects of the signal that the patent holder intended to be considered as a
27 “metric of forward link geometry.” The pertinent questions, then, are whether (1) power
28

1 *and* noise are the *only* characteristics to be considered and (2) whether *both* power and
2 noise are required in this construction.

3 **c) Prosecution History**

4 During prosecution, the applicant amended his original claim—“determining a
5 metric of observed transmission”—to the revised language “determining a metric of
6 *forward link geometry as a function of an* observed transmission.” See AEX36 at 206.
7 Apple asserts that Qualcomm cannot ignore this explicit limitation. Nonetheless, Apple
8 fails to note that the amended claims in the prosecution history also *set forth* the limiting
9 definition of “observed transmission” to be “pilot signals, noise, and traffic on data
10 channels, *or any combination thereof.*” AEX36 at 204, 206. Accordingly, the Court
11 concludes that the prosecution history is of limited value, except to the extent that it
12 reinforces that a metric of forward link geometry was explicitly limited to a specific
13 definition of “observed transmission” such that an observed transmission could constitute
14 “any combination thereof” of “pilot signals, noise, and traffic on data channels.” See
15 AEX36 at 206.

16 **d) Extrinsic Evidence**

17 Apple asserts that one of ordinary skill in the art would understand “forward link
18 geometry” to include both power *and* noise values. See AOCB at 19 (citing AEX22-26—
19 contemporaneous documents from cellular standards organizations). Furthermore, Apple,
20 citing its expert Dr. Bims, asserts that noise is inherently included in the process of
21 determining both a pilot signal or traffic. AEX27 (Bims. Tr.) at 167:25-168:4)
22 (“[o]bserved signal power is what is selected from the group of what is received.”). In
23 contrast, Qualcomm’s expert Dr. Villasenor asserts that “geometry” can be used in the
24 wireless communications context to constitute more than signal power and noise. JA449
25 ¶¶ 49-50.

26 In light of the clarity of the intrinsic evidence, the Court affords minimal weight to
27 the extrinsic evidence and is not persuaded that it lends significant support for Apple’s
28

1 construction.

2 e) **Construction**

3 Based on the plain language of the claim, the Court concludes that power and noise
4 are *not* the only aspects that may be included in determining the “metric of forward link
5 geometry.” *See* JA75 at 12:13-15 (observed transmission is selected from a group
6 consisting of *pilot signals, noise, and traffic* on data channels, *or* any combination
7 thereof.”). The plain language, in particular the “any combination thereof” language,
8 indicates that power and noise are not the exclusive parameters of this term. Nonetheless,
9 neither party has offered constructions of other specific elements that can comprise a
10 metric of forward link geometry. At the claim construction hearing, the Court will
11 consider whether other elements such as “traffic on data channels” should be included in
12 any construction.

13 Next, the claim language and specification teach that power *or* noise is a
14 reasonable reading of “observed transmission” as defined in this claim. *See* JA75 at
15 12:13-15 (“or any combination thereof.”); JA70 at 2:35-37 (defining metric of forward
16 link geometry as a “function of observed pilot signals, noise, *and/or* traffic on data
17 channels.”). Given the clarity in the intrinsic evidence, the Court affords minimal weight
18 to Apple’s extrinsic evidence. Accordingly, the Court agrees with Qualcomm to the
19 extent that (1) power and noise are not the exclusive metrics relied upon in this term and
20 (2) that power *or* noise is an acceptable construction.

21 Nonetheless, Apple is correct that “Qualcomm’s construction, which requires no
22 specific parameters and encompasses any indication of channel quality” is overbroad and
23 frustrates the purpose of the alleged invention. AOCB at 20. Under Qualcomm’s broad
24 construction—“A measurement of one or more characteristics of a signal”—irrelevant
25 characteristics like modulation and frequency that do not provide sufficient information
26 for the base station to capture spatial distance (aka, geometry)—could be considered as
27 part of the metric of forward geometry. This would frustrate the very purpose of the
28

1 invention to transmit information indicating spatial distance and allow for a lower power
 2 acknowledgment to a mobile station. *See AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1239-
 3 40 (Fed. Cir. 2003) (claims should be interpreted consistent with stated purposes and
 4 goals of the invention). The Court also finds the Declaration of Harry Bims persuasive
 5 on this issue where he notes that “Qualcomm’s construction would allow the term
 6 ‘geometry’ to capture characteristics of the signal that have no relationship to the spatial
 7 distance, such as the frequency or modulation of the signal, which is improper.” JA171.

8 Accordingly, based on the claim language, the specification, and the extrinsic
 9 evidence, the Court concludes that a “metric of forward link geometry” is a measurement
 10 that utilizes “observed power **or** noise on a forward link channel.”

11 **E. ‘469 Patent**

12 The ‘469 patent is a method and apparatus for quick retransmission of signals in a
 13 communication system. JA85 at 1:8-28. Upon detection of missing or erroneously
 14 received packets at a receiving terminal, the receiving terminal uses a quality metric to
 15 determine if the packet is correctly received, and then sends a feedback signal to indicate
 16 whether retransmission has been requested. JA78 at Abstract.

17 **1. “unit(s) of signal”/ “unit of received signal”**

Apple and CM Parties’ Proposed Construction	Qualcomm’s Proposed Construction
“unit(s) of signal” / “unit of received signal”	
A preamble, a payload, and a quality metric	This term should be given its plain and ordinary meaning.

24 **a) Claim Language**

25 Independent Claim 1 of the ‘469 patent recites “an apparatus configured to
 26 retransmit signals in a communication system comprising: a decoder configured to
 27 decode contents of a unit of a received signal . . .” JA89 at 10:33-37. Claim 2, a
 28

1 dependent claim, recites “[t]he apparatus of claim 1 wherein the unit of signal is a
2 packet.” JA89 at 10:35-37.

3 Independent claim 11 recites “An apparatus configured to retransmit signals in a
4 communication system, comprising: a decoder configured to decode contents of a unit of
5 received signal.” JA90 at 11:7-9. Claim 2, dependent on this claim, states “[t]he
6 apparatus of claim 11 wherein the unit of signal is a packet.” JA90 at 11:20-21.

7 Apple contends that other elements of claims 1, 11, and 21 require “a quality
8 metric of said unit of signal” and “a preamble of said unit of signal.” JA89 at 10:39-41;
9 JA90 at 11:15-16. This claim language weighs in favor of Apple’s construction as it is
10 indicative that a quality metric and preamble are required aspects of unit of signal.

11 Because the pertinent definition of “packet” is defined in the specification, the
12 Court concludes that the claim language standing alone does not provide any particular
13 insight into the proper construction of “unit of signal” and “unit of received signal.”

14 b) **Specification**

15 Apple’s primary argument is that the specification provides a definitive definition of
16 “unit of signal.” Specifically, Apple points to a statement in the “BACKGROUND OF
17 THE INVENTION” subtitled “Description of the Related Art” defining a “packet”:

18 Unless defined differently, a packet is a unit of a signal comprising a
19 preamble, a payload, and a quality metric.

20 JA85 at 1:22-24. As such, the dispute between the parties involves whether a unit of a
21 signal (and received signal) must *always* comprise a preamble, payload, and quality metric
22 in the context of this patent. Qualcomm asserts that these terms are “straightforward and
23 readily understandable to a jury.”

24 The Court notes that Apple’s constrained definition of “unit of a signal” arises in the
25 context of a definition of the term *packet*, not a definition of the term unit of signal.
26 Nonetheless, within this definition of packet is a limitation for unit of signal to be used
27 “unless defined differently.”

1 Qualcomm asserts that Claim 2 and 12 recite that the “unit of signal is a packet,” and
2 that these dependent claims cannot limit the independent claims in claims 1 and 11 based
3 on the doctrine of claim differentiation. QOCB at 16-17 (citing *Trustees of Columbia Univ.*
4 *v. Symantec Corp.*, 811 F.3d 1359, 1370 (Fed. Cir. 2016) (“Thus, in a situation where
5 dependent claims have no meaningful difference other than an added limitation, the
6 independent claim is not restricted by the added limitation in the dependent claim.”)).

7 **c) Extrinsic Evidence**

8 Apple’s expert Dr. Wicker asserts that the claimed invention cannot even work if
9 “unit of signal” does not mean “a preamble, payload, and a quality metric.” Wicker points
10 to Figure 4 of the patent indicating the necessity of the preamble, quality metric, and
11 payload in performing the method outlined in this patent. *See* JA319 at ¶¶65; JA87-88 at
12 6:63-7:25. Dr. Wicker also asserts that a POSITA would not have found an ordinary
13 meaning to the contested terms at the time the patent was filed. The Court finds this
14 extrinsic evidence persuasive, particularly given the fact that Qualcomm has not presented
15 its own extrinsic evidence to promote any plain and ordinary meaning argument.

16 **d) Court’s Construction**

17 The Federal Circuit has recently cautioned against applying the “plain and
18 ordinary” meaning construction. In *Eon Corp. v. Silver Springs Networks*, 815 F.3d
19 1314, 1317 (Fed. Cir. 2016), Silver Spring asked the district court to construe the terms
20 “portable” and “mobile” in the context of electric watt-hour utility meters attached to the
21 exterior walls of buildings. *Id.* at 1317. By doing so, Silver Spring wanted a clear
22 construction that portable and mobile did not cover fixed/stationary products that were
23 only “theoretically capable of being moved.” *Id.* The district court agreed with EON,
24 finding that no construction was necessary as the terms would have been readily
25 understandable to the jury. The Federal Circuit held that the district court erred by failing
26 to resolve the parties’ active dispute about the scope of the terms, and committed legal
27
28

1 error by leaving the question of claim scope unanswered for the jury to decide. *Id.* at
2 1319 (citing *O2 Micro*, 521 F.3d at 1362).

3 By granting Qualcomm’s request to construe these terms by their plain and
4 ordinary meaning, the Court would similarly fail to resolve the parties’ active dispute
5 over the scope of the terms “unit of signal” and “unit of received signal.” Here, Apple
6 has provided a defined limitation of what can constitute a unit of signal in the context of
7 the patent (preamble, payload, and quality metric). Qualcomm, meanwhile, offers no
8 construction or definition of what additional components could comprise a “unit of
9 signal.” Just as the Federal Circuit required “portable” and “mobile” to be construed to
10 resolve the active dispute of whether these terms included units only theoretically capable
11 of being moved, so too must this Court resolve the scope of the limits of a “unit of
12 signal” in this patent. *See Silver Spring*, 815 F.3d at 1319; *O2 Micro*, 521 F.3d at 1360
13 (“When the parties raise an actual dispute regarding the proper scope of [the] claims, the
14 court, not the jury, must resolve that dispute”). The Court will not leave to the jury to
15 construct a term that the unopposed extrinsic evidence shows has no ordinary meaning to
16 a person of ordinary skill in the art. *See* JA317 ¶ 61 (Apple’s expert states that “unit of
17 signal” would have had no ordinary meaning to one of skill in the art); *3M Innovative*
18 *Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1321 (Fed. Cir. 2013) (“Idiosyncratic
19 language, highly technical terms, or terms coined by the inventor are best understood by
20 reference to the specification.”).

21 Qualcomm raises several arguments that rely on claim construction principles that
22 do not have particular weight in this context. Qualcomm’s claim differentiation
23 argument is afforded less weight where the “description provides a clear meaning for the
24 language of the claim in this case” and because such a clear meaning can “trump[] the
25 doctrine of claim differentiation.” *O.I. Corp. v. Tekmar Co., Inc.*, 115 F.3d 1576, 1582
26 (Fed. Cir. 1997). Pertinently, the Federal Circuit has held that “[a]lthough the doctrine of
27 claim differentiation may at times be controlling, construction of claims is not based
28

1 solely upon the language of other claims; the doctrine cannot alter a definition that is
2 otherwise clear from the claim language, description, and prosecution history.” *Id.* See
3 also *Hormone Research Found., Inc. v. Genentech, Inc.*, 904 F.2d 1558, 1567 n. 15 (Fed.
4 Cir. 1990 (doctrine of claim differentiation “cannot overshadow the express and contrary
5 intentions of the patent draftsman.”). Moreover, Qualcomm fails to even disclose what it
6 thinks the ordinary meaning of “unit of signal”/“unit of received signal” is, citing only a
7 vague definition of “signal” provided by Apple’s expert. The Court agrees with Apple
8 that “[n]o ‘plain and ordinary meaning’ exists” for these terms. ARCB at 9.

9 Accordingly, the Court will accept Apple’s construction. Here, the patentee has
10 provided a definition strongly indicative of the construction of unit of signal/received
11 signal. See *Thorner v. Sony Computer Entm’t Am., LLC*, 669 F.3d 1362 1365 (Fed. Cir.
12 2012) (noting that plain and ordinary meaning does not apply where a patentee sets out a
13 definition and acts as her own lexicographer). The Court concludes that for purposes of
14 claims 1 and 11, “unit(s) of signal” / “unit of received signal” is “[a] preamble, a payload,
15 and a quality metric.”

16 **F. ‘725 Patent**

17 U.S. Patent No. 7,095,725 (“the ’725 Patent”) aims to decrease delays and improve
18 data transmission between cell phones and cell towers. JA142 at Abstract. Specifically,
19 the ’725 Patent deals with situations where a cell phone does not have data to transmit,
20 and the data-justified rate subsequently drops to zero. QOCB at 28. A sudden drop in
21 data-justified rate¹⁵ causes cell phone delay as the data-justified rate needs time to “ramp
22 back up.” *Id.* at 29 (citing JA142 at Abstract). The ’725 Patent addresses this issue by
23

24 ¹⁵ The ’725 patent teaches that “data-justified rate is essentially the maximum rate that can be justified
25 by the amount of data that is queued for transmission by the access terminal.” JA151 at 2:5-8. If there
26 is no data in the access terminal’s transmission queue, then no transmission rate at all is justified. JA151
27 at 10-12. As such, a data-justified rate is the rate warranted in view of how much data the mobile station
28 needs to send at a given time. A “ramp-up-limited rate is the maximum rate that is allowed, considering
the fact that a rapid ramp-up will suddenly increase the interference perceived by other access terminals
and will degrade their performance.” JA151 at 13-16.

1 the utilization of a “dummy rate” that constrains the data-justified rate “to decrease in a
 2 controlled manner” and prevents the rate from suddenly dropping to zero. JA142 at
 3 Abstract. The “data-justified rate is compared to the dummy rate and is not allowed to
 4 fall below the dummy rate.” JA152 at 3:28-33. Preventing a sudden drop in data-
 5 justified rate ensures that a cell phone will not experience delays when the phone
 6 increases transmission rate for functions like real-time video.

7 The Parties disagree over “dummy rate” as it appears in Claim 10 of the claim
 8 language.¹⁶ JA158 at 16:31-34. This analysis proceeds in two parts. First the Court
 9 analyzes whether dummy rate should be construed to “decay” or “decrease.” Apple
 10 describes “dummy rate” as a rate which can “*decay* in a predetermined manner.”
 11 Qualcomm describes “dummy rate” as being able to “*decrease* in predetermined manner
 12 over time without reaching zero.” *Id.* (emphasis added). Second, the Court analyzes
 13 whether the term “dummy rate” should include a negative limitation indicating that a
 14 dummy rate cannot reach zero.

Apple and CM Parties’ Proposed Construction	Qualcomm’s Proposed Construction
“dummy rate”	
a rate which is allowed to decay in a predetermined manner	a rate that may decrease in predetermined manner over time without reaching zero

21 **1. “dummy rate” — decrease v. decay**

22 **a) Claim Language**

23 While Claim 10 addresses “dummy rate,” Claim 10 does not mention “decay” or
 24 “decrease.” JA158 at 16:31-34. “Decay” does not appear in the claim language, and
 25

27 _____
 28 ¹⁶ See Exhibit A of the Joint Claim Construction Chart. Dkt. No. 217-1 at 68.

1 “decrease” appears four times, in Claims 2, 3, 11 and 12, when describing “dummy rate.”
2 JA158-59. The ’725 Patent’s claim language states:

3 2. The method of claim 1, wherein the dummy rate *decreases* by
4 a fraction per one or more transmission frames.

5 3. The method of claim 1, wherein the dummy rate *decreases* by
6 a predetermined number of rate index levels per one or more
7 transmission frames.

8 11. The apparatus of claim 10, wherein the dummy rate
9 *decreases* by a fraction per one or more transmission frames.

10 12. The apparatus of claim 10, wherein the dummy rate
11 *decreases* by a predetermined number of rate index levels per
12 one or more transmission frames.

13 JA158 at 15:45-50, 16:34-39 (emphasis added).

14 b) Specification

15 Apple argues “dummy rate” “is not a common, well-understood term” in the
16 wireless telecommunications community, and the best source of interpretation is the
17 patent specification. AOCB at 29. Apple refers to language from the patent specification
18 that states:

19 “[T]he decrease in the second data transmission rate is constrained by
20 controlling decreases in the data-justified rate. This is accomplished in one
21 embodiment by maintaining a dummy rate which is allowed to *decay* in a
22 predetermined manner. The conventionally calculated data-justified rate is
23 compared to the dummy rate and is not allowed to fall below the dummy rate.”

24 *Id.* at 29-30 (quoting JA152 at 3:27-31) (emphasis added). Apple describes this process
25 as “a controlled decay” that satisfies the ’725 Patent’s stated goal. AOCB at 30. The
26 patent specification mentions “decay” when describing “dummy rate” in two other
27 instances: (1) in a description of how the processor controls the data-justified rate through
28 “maintaining a “dummy rate” which is caused to decay in a predetermined manner.”
JA152 at 3:49-53 and (2) in a description stating that the “dummy rate” can “prematurely
decay” in response to changes in data-justified rate. JA156 at 11:55-61.

1 Qualcomm references the Abstract to argue that “dummy rate” constrains the data-
2 justified rate “to decrease in a controlled manner.” QOCB at 29 (quoting JA142 at
3 Abstract). The patent specification introduces the term “decay factor.” JA 142-59. A
4 “decay factor” can be used “to decrease the value of a dummy rate.” JA156 at 11:26-28.

5 **c) Extrinsic Evidence**

6 Apple’s expert witness, Dr. Jonathan Wells, gives a declaration in support of
7 Apple’s claim construction brief. Joint Ex. 11. In his declaration, Dr. Wells suggests that
8 a person of ordinary skill in the art (“POSITA”) for the ’725 Patent has a bachelor’s
9 degree in engineering and two-plus years of experience with telecommunications
10 networks. Dkt. No. 301-1 at 245. Dr. Wells considers himself a POSITA. *Id.* He
11 believes the patent specification supports use of “decay” and specifically allows the
12 “dummy rate” to “prematurely decay.” *Id.* at JA248-50. Dr. Wells argues that
13 Qualcomm fails to cite any extrinsic evidence in support of its construction, and given
14 Apple’s intrinsic evidence, a POSITA would understand “dummy rate” as “a rate which
15 is allowed to decay in a predetermined manner.” *Id.* at JA255-57. Dr. Wells contends
16 Qualcomm’s use of “may decrease” instead of “decay” does not carry the same
17 connotation to a POSITA. *Id.* at 293.

18 Qualcomm chooses not to provide any extrinsic evidence. Apple argues that
19 Qualcomm is unable to provide any extrinsic evidence that supports Qualcomm’s
20 construction. AOCB at 30.

21 **d) Court’s Construction**

22 Courts consider intrinsic evidence to be “the most significant source of the legally
23 operative meaning of disputed claim language.” *Vitronics Corp.*, 90 F.3d at 1582. Most
24 of the time, analyzing “the intrinsic evidence alone will resolve any ambiguity in a
25 disputed claim term. *Id.* at 1583. Here, because “decay” and “decrease” appear multiple
26 times in the intrinsic evidence and both parties cite to the intrinsic evidence, the Court
27 determines that intrinsic evidence alone is sufficient to resolve this dispute. *See Pall*

1 *Corp. v. Micron Separations, Inc.*, 66 F.3d 1211, 1216 (Fed. Cir. 1995) (suggesting that
2 in situations where intrinsic evidence is sufficient to determine the meaning of a disputed
3 term, a court should not rely on extrinsic evidence). Accordingly, the Court will not rely
4 on the Wells Declaration for purposes of this analysis. *See Markman*, 52 F.3d at 979.

5 The Court finds that although “decrease” is not used to describe “dummy rate” in
6 Claim 10, the fact that dummy rate is described as a “decrease” in other parts of the
7 surrounding claim language weighs significantly in favor of Qualcomm’s construction.
8 *See Conoco, Inc. v. Energy & Environmental Intern., L.C.*, 460 F.3d 1349, 1362 (Fed.
9 Cir. 2006) (“search for the ordinary and customary meaning of a claim term” can “be
10 informed by the surrounding claim language”). Further, the Court determines that
11 because “decrease” is found in surrounding claim language and because the patent
12 specification does not offer an explanation for using “decay” instead of “decrease” in
13 several instances, “decay” is essentially a synonym for “decrease” and not a replacement.
14 *See Anderson Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1368 (Fed. Cir. 2007)
15 (determining that that “composite material” was just a synonym for “composite
16 composition” and not an entirely different expression.). The claim language favors the
17 use of “decrease” over “decay,” and the Court will construe the term accordingly.

18 **2. “dummy rate” — reaching zero**

19 **a) Claim Language**

20 There is no claim language that addresses whether “dummy rate” can reach zero.
21 The Court turns to the specification to address this issue.

22 **b) Specification**

23 Apple contends that nothing in the intrinsic evidence suggests that the “dummy
24 rate” cannot reach zero, and indeed that the patent specification provides specific
25 examples where the “dummy rate” does drop to zero. AOCB at 30 (citing JA156 at
26 11:64-12:05). In its response brief, Apple argues that because Qualcomm stresses the
27 importance of preventing “sudden” drops of data-justified rate so frequently, preventing
28

1 “sudden” drops is the true purpose of the ’725 Patent, and Apple’s construction
2 accomplishes this purpose. ARCB at 13-14. Apple contends that Qualcomm fails to
3 provide any specific examples as to why the “dummy rate” cannot reach zero. *Id.* Apple
4 argues “Qualcomm’s construction improperly grafts on the negative limitation that the
5 rate cannot equal zero.” AOCB at 30 (citing *Omega Eng’g, Inc. v. Raytek Corp.*, 334
6 F.3d 1314, 1323 (Fed. Cir. 2003)).

7 Qualcomm argues that both the intrinsic evidence and purpose of a “dummy rate”
8 support construing “dummy rate” to be a rate that cannot reach zero. QOCB at 29.
9 According to Qualcomm, allowing the data-justified rate to drop to zero creates delays in
10 transmitting time-sensitive data, and that this is precisely what the ’725 Patent aims to
11 prevent. *Id.* Qualcomm explains the “dummy rate,” as described in the ’725 Patent,
12 prevents such sudden drops by not allowing the data-justified rate to fall below the
13 “dummy rate.” *Id.* Qualcomm posits that because the data-justified rate can never be a
14 negative number and the “dummy rate” need always be below the data-justified rate, the
15 “dummy rate” can never reach zero. *Id.* at 30. The “Abstract” supports this notion by
16 stating “the data-justified rate is constrained to decrease in a controlled manner and
17 cannot suddenly drop to 0.” JA 142 at Abstract. Qualcomm argues that, because one of
18 the purposes of the ’725 Patent is to prevent the data-justified rate from reaching zero,
19 allowing the “dummy rate” to reach zero would frustrate the purpose of the invention. *Id.*
20 at 30. Qualcomm contends that Apple’s construction would allow the data-justified rate
21 to reach zero and thus require the cell phone to ramp up the data-justified rate from zero,
22 thus causing sporadic data transmission, something the ’725 Patent is designed to
23 prevent. *Id.* Qualcomm claims it is allowed to impose a “negative claim limitation” on
24 the rate because the contention is “adequately supported” and “the specification describes
25 a reason to exclude the relevant limitation.” QRCB at 15 (citing *Santarus, Inc. v. Par*
26 *Pharm., Inc.*, 694 F.3d 1344, 1351 (Fed. Cir. 2012)).

1 c) **Extrinsic Evidence**

2 Apple’s expert Dr. Wells contends the patent specification gives specific examples
3 where the “dummy rate” reaches zero. JA255 at 255. Dr. Wells posits that the “dummy
4 rate’s” purpose is to prevent *sudden* drops in data-justified rate and not to prevent the
5 data-justified rate from reaching zero. JA256 at 1. Dr. Wells argues that Qualcomm’s
6 construction, by stating the “dummy rate” “may decrease,” allows the “dummy rate” to
7 “decrease” from a high numeric value to zero, thus defeating the purpose of “dummy
8 rate” as found in the ’725 Patent. JA293 at 2. Qualcomm claims it does not provide any
9 extrinsic evidence because its construction comes directly from the intrinsic evidence.
10 QRCB at 15.

11 a) **Court’s Construction of Dummy Rate**

12 As stated in the previous section, because both parties base their arguments off of
13 the patent specification, the Court finds intrinsic evidence alone sufficient for purposes of
14 this analysis. *See Pitney Bowes, Inc.*, 182 F.3d at 1308-09.

15 The Court recognizes that the patent specification includes an embodiment wherein
16 an access terminal initially transmitting at a “rate index of 5” would take five frames at a
17 decay factor of .5 to drop to a “0 rate index.” *See* JA156 at 11:64-12:8; JA255 ¶ 136. Yet,
18 as Qualcomm points out, this description takes place in the context of a description of an
19 “access terminal’s” rate index, not a description of the dummy rate’s transmission rate.
20 Further, any weight this aspect of the embodiment provides to Apple’s construction is
21 negligible because accepting Apple’s overall construction would frustrate the overall
22 purpose of the invention. *See* QRCB at 9-10.

23 A party arguing that a particular interpretation would “frustrate the purpose of the
24 invention” must adequately explain their reasoning. *See Atlantic Construction Fabrics,*
25 *Inc. v. Dandy Products, Inc.* 64 F. App’x 757 (Fed. Cir. 2003) (determining that plaintiff
26 failed to explain why a certain interpretation would “completely frustrate the purpose of
27 the invention.”). Qualcomm does so. According to the specification a primary purpose
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1 of the invention is that “the data-justified rate is constrained to decrease in a controlled
2 manner and cannot suddenly drop to 0.” JA142 at Abstract. The patent specification
3 teaches that the “data-justified rate is compared to the dummy rate and is not allowed to
4 fall below the dummy rate.” JA152 at 3:30-33. Thus, it follows that a dummy rate of
5 zero would frustrate the purpose of the ‘725 Patent to prevent the data-justified rate from
6 reaching zero. Apple argues “Qualcomm’s construction improperly grafts on the
7 negative limitation that the rate cannot equal zero.” AOCB at 30 (citing *Omega Eng’g*,
8 334 F.3d at 1323). Qualcomm responds that it is allowed to impose a “negative claim
9 limitation” on the rate because its contention is “adequately supported” and “the
10 specification describes a reason to exclude the relevant limitation.” QRCB at 15 (quoting
11 *Santarus*, 694 F.3d at 1351).

12 The Court agrees with Qualcomm’s construction. Allowing the “dummy rate” to
13 reach zero would allow the data-justified rate to reach zero. For example, an embodiment
14 in the patent teaches that the conventionally calculated data-justified rate is compared to
15 the dummy rate and is not allowed to fall below the dummy rate. JA152 at 3:30-33.
16 Figure 5 confirms that there would be essentially no purpose to a dummy rate that
17 reaches zero. The patent teaches that in an embodiment a decay factor is used in an
18 embodiment to decrease the value of a dummy rate, wherein a tentative rate is calculated
19 in a normal manner and that is compared to a dummy rate, and the R_3 data-justified rate
20 becomes set to the higher of the tentative rate or dummy rate. JA156 at 11:1-54. If a
21 dummy rate were allowed to be zero, the data-justified rate would *never* rely on the zero
22 dummy rate and would *always* be the tentative data-justified rate, and thus would not
23 further the purpose of this invention. Accordingly, because a dummy rate that can reach
24 zero frustrates a primary purpose of the invention to reduce delays in the transmission of
25 “bursty” data, the Court will construe the term to include the “without reaching zero”
26 language. The Court finds Apple does not provide adequate support to “narrow the
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1 negative claim limitation.” *Imaginal Systematic, LLC v. Leggett & Platt, Inc.*, 805 F.3d
2 1102, 1110 (Fed. Cir. 2015).

3 Apple posits that preventing “sudden” drops in data-justified rate is the true
4 purpose of the ’725 Patent and its construction accomplishes this purpose. ARCB at 14.
5 The Court does not view the prevention of sudden drops in data-justified rate and
6 prevention of the “dummy rate” from reaching zero to be mutually exclusive, but rather
7 two concepts that compliment one another. *3M Innovative Properties Co. v. Tredegar*
8 *Corp.*, 725 F.3d 1315, 1330 (Fed. Cir. 2013) (“Rather than being mutually exclusive, the
9 concepts of [the two terms] are linked.”). Indeed, preventing a dummy rate of zero is
10 instrumental in furthering the goal of preventing a sudden drop in data-justified rate. The
11 Court finds that the “dummy rate” should not be allowed to reach zero, as allowing the
12 “dummy rate” to reach zero would frustrate a primary purpose of the invention.

13 For the foregoing reasons, the Court determines the proper construction of
14 “dummy rate” is the following: “a rate that may decrease in a predetermined manner over
15 time without reaching zero.”¹⁷

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28 ¹⁷ The Court adds an “a” to correct a typo in Qualcomm’s construction.

1 **CONCLUSION AND ORDER**

2 The Court construes the terms at issue as follows:

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Patent Number	Term	Court’s Construction
‘021	“means for comparing the measured power level with said at least one threshold value”	indefinite
	“means for transmitting to the first cellular radio system a request for a free time period in which to perform the measurement, said means being arranged to transmit the request for the free time period in which to perform the measurement only after said measured power level remains below said at least one threshold value”	<u>Function</u> : transmitting to the first cellular radio system a request for a free time period in which to perform the measurement. <u>Structure</u> : transmitter block 604 and equivalents
	“means for receiving . . .”	<u>Structure</u> : power level determination means 615 of receiver block 611, and equivalents.
	“means for measuring . .	<u>Structure</u> : receiver block 611 and equivalents.

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Patent Number	Term	Court's Construction
'630	"means for performing . . ."	indefinite
'549	Preamble	Entire Preamble is a Limitation
	"reverse link busy bit"	information sent by a base station indicating whether its reverse link capacity has been exhausted, i.e., whether it has reached a reverse link capacity limit
'822	"metric of forward link geometry"	observed power or noise on a forward link channel
'469	"unit(s) of signal" / "unit of received signal"	A preamble, a payload, and a quality metric
'725	"dummy rate"	A rate that may decrease in a predetermined manner over time without reaching zero

1 **III. MOTION TO STRIKE**

2 On February 14, 2018, Qualcomm filed a Motion to Strike Apple’s First and Second
3 Amended Invalidity Contentions. Dkt. No. 331. Apple and the Contract Manufacturers
4 filed a response on March 1, 2018. Dkt. No. 345.

5 Pursuant to the Court’s Case Management Order Regulating Discovery and Other
6 Pretrial Proceedings for Patent Claims, Apple and the CMs filed Joint Invalidity
7 Contentions on October 30, 2017. Dkt. No. 117 ¶ 2; Ex. A. Claim construction discovery
8 concluded on January 11, 2018. Dkt. No. 117 ¶ 6. On January 3, 2018, Apple served
9 Qualcomm with a set of first Amended Joint Invalidity Contentions. Ex. B. On January
10 11, 2018, Apple served Qualcomm with a second set of Amended Invalidity Contentions
11 (“Second Amended Invalidity Contentions.”). Ex. C.

12 Qualcomm argues that the plain language of Patent Local Rule 3.6(b) states that that
13 only a “party *opposing* a claim of patent infringement” may serve “as a matter of right”
14 amended invalidity contentions. Patent L.R. 3.6(b). According to Qualcomm, Apple and
15 the CMs are not parties “opposing a claim of patent infringement” as Qualcomm has never
16 counterclaimed that Apple infringes the nine patents-in-suit. *See, e.g.*, Dkt. No. 72.

17 The plain language of the Magistrate Judge’s scheduling order makes clear that he
18 considered Apple a party “opposing a claim of patent infringement” and made a specific
19 scheduling determination to allow Apple to amend its Invalidity Contentions as of right up
20 and until January 11, 2018, the date of completion of claim construction discovery.
21 Notably, the Magistrate Judge’s Order recognized that Qualcomm was not claiming
22 infringement, and yet the Scheduling Order still included a date for a party—which can
23 only be Apple under any plain reading—to file as of right Amended Invalidity Contentions.
24 Under any common sense interpretation of the scheduling order, it is apparent that the
25 Magistrate Judge was allowing for a slight alteration in the Patent Local Rules to take into
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1 account the procedural posture of the case.¹⁸ This interpretation is confirmed by a review
2 of the Patent Local Rules template wherein the Magistrate Judge removed the deadline for
3 filing as of right Amended Infringement Contentions under Local Rule 3.6(a), but retained
4 the deadline for filing as of right Amended Invalidity contentions. *See* Dkt. No. 117 ¶¶ 5-
5 7.

6 This Court’s prior ruling in *Zest IP Holdings, LLC v. Implant Direct Mfg., LLC*, No.
7 10CV0541-GPC-WVG, 2013 WL 5674834, at *7 (S.D. Cal. Oct. 16, 2013) is inapposite.
8 There, the Court considered a *motion* to file amended infringement contentions *after* the
9 deadline for “matter of right” amendment deadline had already passed. There, the Court
10 held that the addition of thirty prior art references would have resulted in undue prejudice
11 to Zest, though the Court granted the motion to amend invalidity contentions as to a single
12 prior art reference. Local Rule 3.6(b) states: “As a matter of right, a party opposing a claim
13 of infringement may serve ‘Amended Invalidity Contentions’ no later than the completion
14 of claim construction discovery. Thereafter, absent undue prejudice to the opposing party,
15 a party opposing infringement may only amend its invalidity contentions . . .” Here, Apple
16 served their amended contentions by the date of completion of claim construction
17 discovery. Accordingly, *Zest* is irrelevant to the instant question because Apple—under a
18 plain reading of the scheduling order—was still within its period to file “matter of right”
19 Amended Invalidity Contentions.

20 Qualcomm has also waited too long to challenge the scheduling order’s ambiguous
21 provision. Qualcomm was on full notice of the scheduling order as of August 18, 2017
22 and never challenged the scheduling order or sought clarification of the ambiguous
23 paragraph. For example, Qualcomm could have submitted an inquiry to Magistrate Judge
24 Dembin to clarify the scope of the scheduling order. Pertinently, Qualcomm had more than
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26 ¹⁸ Nothing in this Order should read to hold that a party seeking a declaratory judgment in the Southern
27 District of California will always be considered a party “opposing a claim of patent infringement” entitled
28 to an amendment as of right. This Order is limited to a specific ambiguity in the Scheduling Order issued
in this case.

1 five months to submit a request for clarification or a challenge to the Scheduling Order.
2 Even if Qualcomm had not carefully parsed through the nuances of the scheduling order,
3 it certainly was on notice as of January 3, 2018 (the date Apple served their first Amended
4 Invalidity Contentions), that Apple believed it had an “as of right” amendment right based
5 on the scheduling order. Yet, no motion for clarification or motion to strike was filed at
6 that time.

7 Further, Qualcomm has not shown diligence in challenging any transgression by
8 Apple. It was served with the Second Amended Invalidity Contentions on January 11,
9 2018, and yet did not file a Motion to Strike these Contentions until February 14, 2018,
10 more than a month after Apple’s document was served. *See* Dkt. No. 331.

11 Next, Qualcomm further contends that the Amended Invalidity Contentions are
12 deficient under the Patent Local Rules by failing to sufficiently explain their asserted
13 grounds of indefiniteness and lack of written description under Patent Local Rule 3.3(d).
14 Courts have held that the level of detail required for invalidity contentions is lower than
15 that required for a claim of obviousness but still must “give the other party enough notice
16 that it can engage in full, timely discovery and litigate its case.” *Medimmune LLC v. PDL*
17 *Biopharma, Inc.*, No. C-08-5590, 2010 WL 760443, at *3 (N.D. Cal. Mar. 4, 2010).
18 Apple’s First Amended Invalidity Contentions presented sufficiently adequate contentions
19 to provide Qualcomm with notice of its theories of invalidity. *See, e.g.*, Ex. B at 143-44
20 (describing indefiniteness theory based on failure to disclose corresponding structures as
21 to ‘630 patent). Moreover, the Court finds that Apple’s Invalidity Contentions provide
22 adequate detail, including through claim charts, concerning the background knowledge of
23 skilled artisans and sufficiently specific reasons as to why skilled artisans would have
24 combined/modified references. These references include nearly 5,000 pages in detailed
25 analysis. *See, e.g.*, Dkt. No. 331-2, AEX. C. Further, Apple has provided far more detail
26 in its invalidity contentions than the contentions rejected in *MediaTek Inc. v. Freescale*
27 *Semiconductor, Inc.*, 2014 WL 690161, at *6 (N.D. Cal. Feb. 21, 2014) (invalidity
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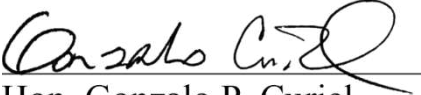
1 contentions listed only barebones description of “Indefiniteness, Written
2 Description/Enablement”).

3 Accordingly, the Court will tentatively **DENY** Qualcomm’s motion to strike Apple’s
4 First and Second Amended Invalidity Contentions in its entirety.

5 Counsel are advised that the Court’s rulings are tentative, and the Court will entertain
6 additional argument at the hearing on March 22, 2018.

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8 **IT IS SO ORDERED.**

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10 Dated: March 21, 2018

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12 Hon. Gonzalo P. Curiel
13 United States District Judge
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