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4   UNITED STATES DISTRICT COURT

5   NORTHERN DISTRICT OF CALIFORNIA

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7   DSS TECHNOLOGY MANAGEMENT,   Case No. 14-cv-05330-HSG
    INC.,
8   **CLAIM CONSTRUCTION ORDER**
                        Plaintiff,
9   Re: Dkt. Nos. 72, 157
              v.
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    APPLE, INC.,
11
                        Defendant.
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13   **I.   BACKGROUND**

14   Plaintiff DSS Technology Management, Inc. filed its complaint against Defendant Apple,

15   Inc. on November 26, 2013 in the Eastern District of Texas, alleging infringement of U.S. Patent

16   Nos. 6,128,290 (the "'290 patent") and 5,699,357 (the "'357 patent"). Dkt. No. 1. Plaintiff later

17   withdrew all infringement allegations as to the '357 patent, so presently only the '290 patent is at

18   issue. See Dkt. No. 96 at 2, 4. On November 7, 2014, the Eastern District of Texas granted

19   Defendant's motion to transfer the case to the Northern District of California. Dkt. No. 85. On

20   February 13, 2015, the case was reassigned to this Court.

21   On December 4, 2014, Defendant filed two petitions for inter partes review (IPR) of the

22   '290 patent. Dkt. No. 99 at 1. All of the '290 patent claims asserted by Plaintiff were covered by

23   Defendant's petitions. Id. at 3. On May 1, 2015, the Court stayed this case pending results of the

24   IPRs. Dkt. No. 122. Both IPRs resulted in a final decision in Plaintiff's favor, and the Court lifted

25   the stay on July 27, 2018. Dkt. No. 145.

26   Plaintiffs currently assert claims 1 through 4 of the '290 patent, and the parties propose

27   seven claim terms for construction. Dkt. No. 165. This order follows claim construction briefing,

28   a technology tutorial, and a claim construction hearing.

II. LEGAL STANDARD

Claim construction is a question of law to be determined by the Court. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 384 (1996). "The purpose of claim construction is to determine the meaning and scope of the patent claims asserted to be infringed." *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) (internal quotation marks omitted).

Generally, claim terms should be "given their ordinary and customary meaning"—in other words, "the meaning that the term[s] would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc) (internal quotation marks omitted). There are only two circumstances where a claim is not entitled to its plain and ordinary meaning: "1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution." *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

When construing claim terms, the Federal Circuit emphasizes the importance of intrinsic evidence such as the language of the claims themselves, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1312–17. The claim language can "provide substantial guidance as to the meaning of particular claim terms," both through the context in which the claim terms are used and by considering other claims in the same patent. Id. at 1314. The specification is likewise a crucial source of information. Id. at 1315–17. Although it is improper to read limitations from the specification into the claims, the specification is "the single best guide to the meaning of a disputed term." Id. at 1315 (noting that "the specification is always highly relevant to the claim construction analysis," and that "[u]sually, it is dispositive" (internal quotation marks omitted)); see also Merck & Co. v. Teva Pharm. USA, Inc., 347 F.3d 1367, 1371 (Fed. Cir. 2003) (explaining that "claims must be construed so as to be consistent with the specification").

Despite the importance of intrinsic evidence, courts may also consider extrinsic evidence—technical dictionaries, learned treatises, expert and inventor testimony, and the like—to help construe the claims. *Phillips*, 415 F.3d at 1317–18. For example, dictionaries may reveal what

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the ordinary and customary meaning of a term would have been to a person of ordinary skill in the art at the time of the invention. Frans Nooren Afdichtingssystemen B.V. v. Stopaq Amcorr Inc., 744 F.3d 715, 722 (Fed. Cir. 2014) ("Terms generally carry their ordinary and customary meaning in the relevant field at the relevant time, as shown by reliable sources such as dictionaries, but they always must be understood in the context of the whole document—in particular, the specification (along with the prosecution history, if pertinent)."). Expert testimony can also help "to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field." Phillips, 415 F.3d at 1318. Extrinsic evidence is, however, "less significant than the intrinsic record in determining the legally operative meaning of claim language." Id. at 1317 (internal quotation marks omitted).

III. PERSON OF ORDINARY SKILL IN THE ART

The parties agree that a "person of ordinary skill in the art" of the '290 patent is: "a person with a bachelor of science in electrical engineering and at least two years of experience in the area of wireless communication or similar experience." Dkt. No. 72 at 6; Dkt. No. 74 at 3[1].

IV. AGREED TERMS

Pursuant to the parties' stipulation, the Court will not construe the claim terms "local oscillator" and "controlled by said oscillator," appearing in claims 9 and 10, which are no longer asserted in this matter. Dkt. No. 165 at 2. The parties also agreed during the Markman hearing that the construction of the term "adapted to operate within a short range of [said server unit]" should be: "within a range in which the accuracy of synchronization is not appreciably affected by transit time delays, including at least the range of within 20 meters." Id. at 2–3.

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[1] Defendant's proposed definition of person of ordinary skill in the art states that work experience should be one to two years.

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V. DISPUTED TERMS

A. "code sequence" (claims 1 & 3)

Plaintiff's Construction	Defendant's Construction
"information specifying the time at which a communication may occur"	"a series of values, where each value in the series represents a time slot within a frame interval where a unit's transmitter is energized or a time slot where a unit's transmitter is depowered"

The Court adopts Plaintiff's construction modified as follows: "a series of values specifying the time at which a communication between a server and a peripheral unit may occur"

Claim 1 states, in relevant part: "said server and peripheral transmitters being energized in low duty cycle RF bursts at intervals determined by a **code sequence** which is timed in relation to said synchronizing information." Dkt. No. 72-1 ("'290 Patent") at claim 1 (emphasis added). Claim 3 states, in relevant part: "wherein a **code sequence** for a given one of said units is transmitted within a respective time slot." Id. at claim 3 (emphasis added).

Defendant contends that "code sequence" is a coined term that would have no meaning to a person of skill in the art without further definition in the specification. Dkt. No. 74 at 6. Defendant's construction therefore limits the term to the single embodiment found in column 7 of the specification. See '290 Patent at 7:18–43. That embodiment describes the use of Optically Orthogonal Codes (OOCs), which act as the code sequences of the claims. Id. These OOCs contain "codewords" that are sequences of many zeroes, "with three scattered ones representing the locations of the slots in which RF bursts are to be transmitted or received." Id. at 7:27–29.

Defendant cites two Federal Circuit cases to support its proposition that "code sequence" is a coined term that would have no independent meaning to a person of skill in the art. Id. (citing Irdeto Access, Inc. v. Echostar Satellite Corp., 383 F.3d 1295, 1300 (Fed. Cir. 2004) and MyMail, Ltd. v. Am. Online, Inc., 476 F.3d 1372, 1376 (Fed. Cir. 2007)). Neither case supports Defendant's proffered construction. In MyMail, "[b]oth parties agree[d] that the term" was "a coined term, without a meaning apart from the patent." MyMail, Ltd. v. Am. Online, Inc., 476 F.3d

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1372, 1376 (Fed. Cir. 2007). And Irdeto Access notes that "if a disputed term has no previous meaning to those of ordinary skill in the prior art[,] its meaning, then, must be found [elsewhere] in the patent." Irdeto Access, 383 F.3d at 1300 (internal quotation marks omitted). Here, the record does not establish that "code sequence" had no other accepted meaning to persons of ordinary skill of the art at the time of the patent. Plaintiff notes that the term was used commonly at the time of the '290 patent, including in at least one patent cited on the face of the '290 patent. Dkt. No. 82 at 3 (citing U.S. Pat. No. 5,371,734).

Where, as here, "guidance is not provided in explicit definitional format, the specification may define claim terms 'by implication' such that the meaning may be 'found in or ascertained by a reading of the patent documents.'" Irdeto Access, 383 F.3d at 1300 (quoting Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1268 (Fed.Cir.2001)) (some internal quotation marks omitted). The term "code sequence" is not defined explicitly in the specification, nor is it defined by implication. In fact, the defining embodiment to which Defendant points never recites the phrase "code sequence." See '290 Patent at 7:18–43. Further, because Defendant has not established that the term "code sequence" is a coined term, and therefore defined by the specification, the Court must apply the "heavy presumption" that the term be given its ordinary meaning to a person of skill in the art at the time of invention. Aylus Networks, Inc. v. Apple Inc., 856 F.3d 1353, 1358 (Fed. Cir. 2017).

Defendant's construction is too narrow to encompass the plain meaning of "code sequence." Defendant's construction imports the terms "time slot" and "frame interval" from the specification and dependent claims, and adds from the OOC embodiment the condition that certain elements of the code sequence must correspond to time periods when the transmitter is "depowered." The plain meaning of "code sequence" does not include these limitations.

Plaintiff's construction, as Defendant points out, does not capture the plain meaning of the terms "code" or "sequence." See Dkt. No. 74 at 3. "Information," on its own, does not limit the term to its plain meaning, as it encompasses values that are not encoded, as well as values that are not sequential (e.g., a single digit). Defendant proffers several dictionary definitions of the term "sequence," all of which connote a series of items or objects. Dkt. No. 74 at 6 n.4; Dkt. No. 74-2

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The Court therefore adopts the following construction, which incorporates the plain meaning of the term without incorporating narrowing elements from the specification: "a series of values specifying the time at which a communication between a server and a peripheral unit may occur."

B.   "which is timed in relation to" (claim 1)

Plaintiff's Construction	Defendant's Construction
"occurring at a specified interval of time relative to"	"the values of the code sequence are aligned to correspond to time slots in a frame interval"

The Court adopts Plaintiff's construction.

Claim 1 reads, in relevant part: "said server and peripheral transmitters being energized in low duty cycle RF bursts at intervals determined by a code sequence, **which is timed in relation to** said synchronizing information." '290 Patent at claim 1 (emphasis added).

Defendant's proposed construction again unnecessarily imports certain limitations of the column 7 embodiment into the claims. Because the clause "which is timed in relation to" modifies the term "code sequence," Defendant's construction tracks the language and functionality from the same column 7 embodiment discussed above with respect to the term "code sequence." See Dkt. No. 74 at 10; '290 Patent at 7:18–43. But given the Court's construction of "code sequence," the plain meaning of the phrase "timed in relation to" does not limit the claim to "time slots" within a "frame interval."

Further, the doctrine of claim differentiation creates a presumption that "an independent claim should not be construed as requiring a limitation added by a dependent claim." Curtiss-Wright Flow Control Corp. v. Velan, Inc., 438 F.3d 1374, 1380 (Fed. Cir. 2006). Although neither "time slot" nor "frame interval" appears in the text of claim 1, each of those terms is written into dependent claims that depend on claim 1. See '290 Patent at claim 2, 3.

Plaintiff's proffered construction neither improperly limits that scope of the claim term nor expands the term beyond its plain meaning. The Court therefore adopts Plaintiff's proposed

construction: "occurring at a specified interval of time relative to."

C. "time slots" (claim 2)

Plaintiff's Construction	Defendant's Construction
"intervals of time"	"a fixed period of time within a predetermined frame interval where a respective peripheral unit or server microcontroller unit is to transmit or not, and whether it will receive or not"

The Court adopts Plaintiff's construction.

Claim 2 reads, in relevant part: "wherein said server and peripheral units are allocated respective **time slots** within a predetermined frame interval for transmitting." '290 patent at claim 2 (emphasis added).

Defendant's construction: (1) superfluously repeats the limitation "within a predetermined frame interval"; and (2) adds without any apparent basis a limitation wherein the server or peripheral unit will either "receive or not." Both parties agree that the time slots described in the specification "represent periods of times in which a peripheral device . . . may be assigned to transmit or receive data." Dkt. No. 72 at 16 (citing '290 patent at 5:44–63, Fig. 6); Dkt. No. 74 at 13. However, Defendant offers no evidence that a person of skill in the art at the time of the invention would read the phrase "time slots within a predetermined frame interval for transmitting" to mean "time slots within a predetermined frame interval for either transmitting or receiving." The Court finds no reason to read elements found in the specification into the language of these claims.

Plaintiff's proposed construction neither improperly limits that scope of the claim term nor expands the term beyond its plain meaning. The Court therefore adopts Plaintiff's proposed construction: "intervals of time."

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D. "RF synchronizing beacons" (claim 4)

Plaintiff's Construction	Defendant's Construction
"transmissions used to establish or maintain synchronization"	"RF bursts that are nonuniformly spaced in time and define a unique frame interval for a server microcomputer unit"

The Court adopts Defendant's construction.

Claim 4 reads, in relevant part: "wherein said server microcomputer unit transmits **RF synchronizing beacons** at times within each of a predetermined sequence of frames which times vary in accordance with a code unique to the particular server microcomputer unit." '290 patent at claim 4 (emphasis added).

Both parties agree that "RF synchronizing beacons" is a term that was not well-known to a person of skill in the art at the time of the patent without further definition in the specification. See Dkt. No. 72 at 18; Dkt. No. 74 at 16. Both parties point to the embodiment in columns 7 and 8 of the specification as an illuminating definition of the term. Dkt. No. 72 at 18 (citing '290 patent at 7:63–8:8); Dkt. No. 74 at 16 (citing '290 patent at 7:63–8:20). The relevant disclosure in the specification states:

> As will be understood by those skilled in the art, the TDMA system is greatly facilitated by the establishment of a common frame time base between PEA and PDA. **In establishing this common time base, the present invention employs timing or synchronization beacons (SBs) transmitted by the PDA**. Each SB consists of eight RF bursts spread out over 252 slots. One of the SBs arbitrarily starts a frame. The positions of the remaining seven SBs are selected pseudo-randomly with two restrictions. First the maximum interval between two successive SBs is less than 6.144 milliseconds. Secondly, the positions must allow a unique frame determination based on the intervals between SBs. Thus for example, equidistantly spaced SBs are not allowed.

'290 patent at 7:62–8:8 (emphasis added).

Plaintiff contends that, because the individual words "RF," "synchronizing," and "beacon" were known in to those of skill in the art, the term "RF synchronizing beacon" was known, and therefore is not subject to limitation by the specification. Dkt. No. 82 at 6. Plaintiff argues that "stringing together several well-known words does not suddenly transform the phrase comprised

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of those words into a 'coined term.'" Id.

The Court disagrees. Here, although the claim language strings well-known words together, Plaintiff acknowledges that the resulting phrase was not known in the art outside of the patent. Dkt. No. 72 at 18. The phrase is therefore potentially subject to limitations outlined in the specification. See Irdeto Access, 383 F.3d at 1300 ("[I]f a disputed term has 'no previous meaning to those of ordinary skill in the prior art[,] its meaning, then, must be found [elsewhere] in the patent.'").

Plaintiff's proposed construction does not capture the specification's description that the synchronization beacons must be spaced such that "the positions . . . allow a unique frame determination based on the intervals between SBs." '290 patent at 8:6–7. Defendant's proposed construction successfully captures this description from the specification without importing additional limitations not found in the specification's embodiment. The Court therefore adopts Defendant's proposed construction: "RF bursts that are nonuniformly spaced in time and define a unique frame interval for a server microcomputer unit."

E. "[RF bursts at] intervals determined by a code sequence" (claim 1)

Plaintiff's Construction	Defendant's Construction
"a plurality of periods of time determined by a code sequence [information specifying the time at which a communication may occur]"	"periods between time slots where the transmitters are energized are preset by a code sequence"

The Court adopts Plaintiff's construction.

Claim 1 reads, in relevant part: "said server and peripheral transmitters being energized in low duty cycle RF bursts **at intervals determined by a code sequence**, which is timed in relation to said synchronizing information." '290 Patent at claim 1 (emphasis added).

Defendant's proposed construction, similar to its proposed constructions for "code sequence" and "timed in relation to," improperly imports the term "time slot" into claim 1. See Sections V(A) and V(B), supra. Further, Defendant defines "determined" to mean "predetermined or preset," Dkt. No. 74 at 19 (emphasis added), a proposal that has no basis in the plain meaning

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of the claim language or in the specification.

Plaintiff's proposed construction simply defines "intervals" as "periods of time." Defendant does not contend that this definition fails to encompass the embodiments in the specification, and simply argues that Plaintiff's definition "does not assist the jury." Dkt. No. 74 at 19. Given the clear deficiencies in Defendant's construction and no substantive objection to Plaintiff's proposed construction, the Court adopts Plaintiff's proposed construction: "a plurality of periods of time determined by a code sequence."

F. "a server microcomputer" (claim 1)

Plaintiff's Construction	Defendant's Construction
plain meaning, or: "a host computer acting as the hub of a local network"	"a portable device used to effect bidirectional wireless data communication with peripheral units"

The Court adopts Plaintiff's construction.

Defendant contends that "server microcomputer" was a coined term with no understood meaning at the time of the invention, and therefore must be limited to the descriptions in the specification. Dkt. No. 74 at 25–28. Because all of the embodiments in the specification describe a portable server, Defendant reads that limitation into its construction for this term. Id.

Defendant cites Nystrom v. TREX Co., Inc. as an example of a claim term ("board") that was limited to the scope of the embodiments in the specification (boards made of wood), despite no clear disavowal of claim scope. Nystrom v. TREX Co., 424 F.3d 1136, 1142–1146 (Fed. Cir. 2005). The term at issue here is different from the term "board" in Nystrom for several reasons. First, in Nystrom, "both parties acknowledge[d] the ordinary meaning of 'board' as 'a piece of sawed lumber.'" Id. at 1145. Here, neither party contends that the ordinary meaning of "server microcomputer" requires portability. Further, the prosecution history in Nystrom included a statement distinguishing the invention from prior art on the basis that the prior art was not directed to wooden boards. Id. at 1144.

Here, Plaintiff invokes the doctrine of claim differentiation and points to a parent patent to the '290 patent whose claims are limited to portable sever microcomputer units. Dkt. No. 72 at 29

1 (citing Dkt. No. 72-6 at claims 1, 6, 11, 12, 15, and 18). The '357 patent (parent to the '290

2 patent) explicitly uses the word "portable" to describe a "server microcomputer" in each of its

3 independent claims. See Dkt. No. 1-2 ("'357 patent") at claims 1, 6, 11, 12, 15, 18. The '357

4 patent specification is nearly identical to the '290 patent specification. One of the few notable

5 differences lies in column 3 of each patent. The '357 patent reads:

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7 These devices include a server microcomputer which is battery
   powered and portable so as to be carried on the person of a user
   and a plurality of peripheral units which are also battery powered
8 and portable and which provide input information from the user or
   output information to the user.

9 '357 patent at 3:17–21 (emphasis added). In contrast, the '290 patent reads:

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11 These devices include a server microcomputer and a plurality of
    peripheral units which are battery powered and portable and which
    provide input information from the user or output information to the
    user.

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13 '290 patent at 3:22–25.

14 The explicit inclusion of the "portable" limitation in the specification and in each claim

15 describing a "server microcomputer" in the '357 patent is evidence that portability is not an

16 inherent characteristic of a server microcomputer. The absence of the term "portable" as a

17 descriptor of the server microcomputer in the specification and claims of the '290 patent, and the

18 use of the word "portable" in several independent claims—including claim 1—to describe

19 peripheral units, also weighs in favor of a construction that differentiates between the claim term

20 at issue here and other claim terms in the intrinsic record. See '290 patent at claims 1, 5, and 6.

21 Defendant's contention that "server microcomputer" had no understood meaning in the art

22 is not based on any evidence that the term was not prevalent at the time of the invention. Rather,

23 Defendant relies on the lack of evidence presented by Plaintiff that the term "server

24 microcomputer" was well-known. Dkt. No. 74 at 26. The mere absence of evidence is not

25 sufficient to overcome the "heavy presumption" that the term be given its ordinary meaning to a

26 person of skill in the art at the time of invention. Aylus Networks, 856 F.3d at 1358.

27 Defendant's proffered construction improperly limits that scope of the claim term. The

28 Court therefore adopts Plaintiff's proposed construction: "a host computer acting as the hub of a

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local network."

VI.   CONCLUSION

The Court **CONSTRUES** the disputed terms as follows:

Claim(s)	Claim Term	Construction
1, 3	"code sequence"	"a series of values specifying the time at which a communication between a server and a peripheral unit may occur"
1	"which is timed in relation to"	"occurring at a specified interval of time relative to"
2	"time slots"	"intervals of time"
4	"RF synchronizing beacons"	"RF bursts that are nonuniformly spaced in time and define a unique frame interval for a server microcomputer unit"
1	"[RF bursts at] intervals determined by a code sequence"	"a plurality of periods of time determined by a code sequence"
1	"a server microcomputer"	"a host computer acting as the hub of a local network"
1	"adapted to operate within a short range of [said server unit]"	"within a range in which the accuracy of synchronization is not appreciably affected by transit time delays, including at least the range of within 20 meters"

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1   In addition, the Court **SETS** a further case management conference ("CMC") for January

2   8, 2019 at 2:00 p.m. The Court **DIRECTS** the parties to meet and confer before the CMC to

3   discuss a proposed case schedule through trial and to submit a joint CMC statement by January 3,

4   2019.[2]

5   **IT IS SO ORDERED.**

6   Dated: 12/6/2018

7   _____
     HAYWOOD S. GILLIAM, JR.

8   United States District Judge

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26   [2] In its responsive claim construction brief, Apple relies on the testimony of Phillip Carvey, the

27   named inventor of the '290 patent. See Dkt. No. 74-1. Plaintiff filed a motion to strike this
     testimony. Dkt. No. 157. The Court does not rely on the Carvey testimony and **DENIES**

28   the Motion to Strike as moot.