IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

JOE ANDREW SALAZAR, *Plaintiff,* v. AT&T MOBILITY LLC, SPRINT UNITED MANAGEMENT COMPANY, T-MOBILE USA INC., CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS, INC., *Defendants,* HTC CORP. and HTC AMERICA, INC., *Intervenors.*	CIVIL ACTION NO. 2:20-cv-00004-JRG

CLAIM CONSTRUCTION MEMORANDUM OPINION AND ORDER

Before the Court is the opening claim construction brief of Joe Andrew Salazar ("Plaintiff") (Dkt. No. 97, filed on June 10, 2020),[1] the response of AT&T Mobility LLC; Sprint/United Management Company; T-Mobile USA, Inc.; Cellco Partnership d/b/a Verizon Wireless; HTC Corporation; and HTC America, Inc. (collectively "Defendants") (Dkt. No. 102, filed on June 24, 2020), and Plaintiff's reply (Dkt. No. 103, filed on July 1, 2020) and supplemental brief (Dkt. No. 112, filed on July 30, 2020). The Court held a hearing on the issues of claim construction and claim definiteness on July 24, 2020. Having considered the arguments and evidence presented by the parties at the hearing and in their briefing, the Court issues this Order.

[1] Citations to the parties' filings are to the filing's number in the docket (Dkt. No.) and pin cites are to the page numbers assigned through ECF.

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I. BACKGROUND

Plaintiff alleges infringement of U.S. Patent No. 5,802,467 (the "'467 Patent"). The '467 Patent is entitled Wireless and Wired Communications, Command, Control and Sensing System for Sound and/or Data Transmission and Reception. The application leading to the '467 Patent was filed on September 28, 1995 and the patent issued on September 1, 1998. Plaintiff asserts Claims 1–7, 27–30, and 34. Dkt. No. 97 at 7.

The '467 Patent was previously construed by the Court in Claim Construction Opinion and Order, *Joe Andrew Salazar v. HTC Corporation et al.*, No. 2:16-cv-01096-JRG, Dkt No. 108 (E.D. Tex. Nov. 3, 2017) and Report and Recommendation, *Joe Andrew Salazar v. HTC Corporation et al.*, No. 2:16-cv-01096-JRG, Dkt No. 250 (E.D. Tex. May 1, 2018). The claim construction order is referred to herein as the "*HTC CC Order*," the Report and Recommendation as the "*HTC R&R*," and the case as the "HTC Case."

In general, the '467 Patent is directed to technology for "wireless and wired communications, command, control and sensing … for the two way communication of sound, voice, and data with any appliance and/or apparatus capable of transmitting and/or receiving compatible sound, voice and data signals." '467 Patent col.1 ll.8–13.

The abstract of the '467 Patent provides:

> An interactive microprocessor based wireless communication device includes sound and data transceivers, signal detection and coupling devices, signal conversion device, voice recording, playback and storage device, voice activated device, display device, touch screen or similar device, sensors, frequency generation device, sound detection and reproduction devices and power source to concurrently perform generalized two way wireless communications, command, control and sensing functions utilizing radio and infra-red frequency communication links. A microprocessor receives signals from the touch screen and generates a digital data, command/or control signal for transmission to external devices such as home appliances and remote sensors. The microprocessor also responds to voice signal commands received via microphone and a voice processor. The microprocessor uses this signal to generate data, command/or control signals

for transmission to external devices such as telephone, paging and intercom systems. Sound signals may be stored in a voice recorder and playback IC for subsequent message processing and coupling to a transceiver and/or a speaker. Telephone ringer signals are generated by the microprocessor and are coupled to a ringer for audio output. In response to certain commands, the wireless communication device establishes a communication link with external devices using radio frequency or infra-red frequency transmission and/or reception. Sensor signals are created by sensors that can detect physical differential changes and that can convert the changes into measurements. These signals are coupled to the microprocessor for further processing, display and/or transmission.

Claims 1 and 34, the asserted independent claims, recite as follows (the disputed terms are emphasized and the terms that Defendants contend render claims indefinite are underlined):

1. A communications, command, control and sensing system for communicating with a plurality of external devices comprising:

a microprocessor for generating a plurality of control signals used to operate said system, said microprocessor creating a plurality of reprogrammable communication protocols, for transmission to said external devices wherein each communication protocol includes a command code set that defines the signals that are employed to communicate with each one of said external devices;

a memory device coupled to said microprocessor ***configured to*** store ***a plurality of parameter sets retrieved by said microprocessor*** so as to ***recreate a desired command code set***, ***such that the memory space required to store said parameters is smaller than the memory space required to store said command code sets***;

a user interface coupled to said microprocessor for sending a plurality of signals corresponding to user selections to said microprocessor and displaying a plurality of menu selections available for the user's choice, ***said microprocessor generating a communication protocol in response to said user selections***; and

an infra-red frequency transceiver coupled to said microprocessor for transmitting to said external devices and receiving from said external devices, infra-red frequency signals in accordance with said communications protocols.

34. A communications, command, control and sensing system for communicating with a plurality of external devices comprising:

a microprocessor for generating a plurality of control signals used to operate said system, said microprocessor creating a plurality of reprogrammable communication protocols for transmission to said external devices wherein each communication protocol includes a command code set that defines the signals that are employed to communicate with each one of said external devices;

a memory device coupled to said microprocessor ***configured to*** store ***a plurality of parameter sets retrieved by said microprocessor*** so as to ***recreate*** based on said parameter sets a desired set of pulse signals corresponding to logical "1's" and "0's" as specified by a command code set;

a user interface coupled to said microprocessor for sending a plurality of signals corresponding to user selections to said microprocessor and displaying a plurality of menu selections available for the user's choice, ***said microprocessor generating a communication protocol in response to said user selections***; and

an infra-red frequency transceiver coupled to said microprocessor for transmitting to said external devices and receiving from said external devices, infra-red frequency signals in accordance with said communications protocols.

II. LEGAL PRINCIPLES

A. Claim Construction

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). To determine the meaning of the claims, courts start by considering the intrinsic evidence. *Id.* at 1313; *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 861 (Fed. Cir. 2004); *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. *Phillips*, 415 F.3d at 1314; *C.R. Bard, Inc.*, 388 F.3d at 861. The general rule—subject to certain specific exceptions discussed *infra*—is that each claim term is construed according to its ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the patent. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003); *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014) ("There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.") (vacated on other grounds).

"The claim construction inquiry . . . begins and ends in all cases with the actual words of the claim." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998). "[I]n all aspects of claim construction, 'the name of the game is the claim.'" *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014) (quoting *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998)). First, a term's context in the asserted claim can be instructive. *Phillips*, 415 F.3d at 1314. Other asserted or unasserted claims can also aid in determining the claim's meaning, because claim terms are typically used consistently throughout the patent. *Id.* Differences among the claim terms can also assist in understanding a term's meaning. *Id*. For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. *Id*. at 1314–15.

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id*. (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id*. (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). But, "'[a]lthough the specification may aid the court in interpreting the meaning of disputed claim language, particular embodiments and examples appearing in the specification will not generally be read into the claims.'" *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988)); *see also Phillips*, 415 F.3d at 1323. "[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record

that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

The prosecution history is another tool to supply the proper context for claim construction because, like the specification, the prosecution history provides evidence of how the U.S. Patent and Trademark Office ("PTO") and the inventor understood the patent. *Phillips*, 415 F.3d at 1317. However, "because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.* at 1318; *see also Athletic Alternatives, Inc. v. Prince Mfg.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (ambiguous prosecution history may be "unhelpful as an interpretive resource").

Although extrinsic evidence can also be useful, it is "'less significant than the intrinsic record in determining the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc.*, 388 F.3d at 862). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but technical dictionaries and treatises may provide definitions that are too broad or may not be indicative of how the term is used in the patent. *Id*. at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's definition are not helpful to a court. *Id*. Extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id*. The Supreme Court has explained the role of extrinsic evidence in claim construction:

> In some cases, however, the district court will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period. *See, e.g., Seymour v. Osborne*, 11 Wall. 516, 546 (1871)

> (a patent may be "so interspersed with technical terms and terms of art that the testimony of scientific witnesses is indispensable to a correct understanding of its meaning"). In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the "evidentiary underpinnings" of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal.

Teva Pharm. USA, Inc. v. Sandoz, Inc., 574 U.S. 318, 331–32 (2015).

B. Departing from the Ordinary Meaning of a Claim Term

There are "only two exceptions to [the] general rule" that claim terms are construed according to their 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 the claim term either in the specification or during prosecution."[2] *Golden Bridge Tech., Inc. v. Apple Inc.*, 758 F.3d 1362, 1365 (Fed. Cir. 2014) (quoting *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012)); *see also GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014) ("[T]he specification and prosecution history only compel departure from the plain meaning in two instances: lexicography and disavowal."). The standards for finding lexicography or disavowal are "exacting." *GE Lighting Sols.*, 750 F.3d at 1309.

To act as his own lexicographer, the patentee must "clearly set forth a definition of the disputed claim term," and "clearly express an intent to define the term." *Id.* (quoting *Thorner*, 669 F.3d at 1365); *see also Renishaw*, 158 F.3d at 1249. The patentee's lexicography must appear "with reasonable clarity, deliberateness, and precision." *Renishaw*, 158 F.3d at 1249.

To disavow or disclaim the full scope of a claim term, the patentee's statements in the specification or prosecution history must amount to a "clear and unmistakable" surrender. *Cordis*

[2] Some cases have characterized other principles of claim construction as "exceptions" to the general rule, such as the statutory requirement that a means-plus-function term is construed to cover the corresponding structure disclosed in the specification. *See, e.g., CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1367 (Fed. Cir. 2002).

Corp. v. Boston Sci. Corp., 561 F.3d 1319, 1329 (Fed. Cir. 2009); *see also Thorner*, 669 F.3d at 1366 ("The patentee may demonstrate intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope."). "Where an applicant's statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable." *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013).

C. Definiteness Under 35 U.S.C. § 112, ¶ 2 (pre-AIA) / § 112(b) (AIA)

Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must "inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). If it does not, the claim fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 901. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application for the patent was filed. *Id.* at 911. As it is a challenge to the validity of a patent, the failure of any claim in suit to comply with § 112 must be shown by clear and convincing evidence. *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017). "[I]ndefiniteness is a question of law and in effect part of claim construction." *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012).

When a term of degree is used in a claim, "the court must determine whether the patent provides some standard for measuring that degree." *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015) (quotation marks omitted). Likewise, when a subjective term is used in a claim, "the court must determine whether the patent's specification supplies some standard for measuring the scope of the [term]." *Datamize, LLC v. Plumtree Software, Inc.*, 417

F.3d 1342, 1351 (Fed. Cir. 2005). The standard "must provide objective boundaries for those of skill in the art." *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014).

D. Previous Constructions of Disputed Terms

D-1. Prior court constructions are entitled to reasoned deference.

The "importance of uniformity in the treatment of a given patent" suggests a level of deference to previous court constructions of disputed claim terms. *See Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1329 (Fed. Cir. 2008) (quoting *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996)); *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 329 (2015) (noting that "prior cases . . sometimes will serve as persuasive authority"). While the "doctrine of *stare decisis* does not compel one district court judge to follow the decision of another . . . previous claim constructions in cases involving the same patent are entitled to substantial weight." *TQP Dev., LLC v. Intuit Inc.*, No. 2:12-CV-180-WCB, 2014 U.S. Dist. LEXIS 84057, at *21–22 (E.D. Tex. June 20, 2014) (Bryson, J.).

D-2. In some instances, a party may be estopped from pursuing a claim construction different from a prior court construction under the equitable doctrine of issue preclusion.

In some instances, previous court construction of a disputed term may trigger issue preclusion and bind a party to a previous construction. *Teva*, 574 U.S. at 329 ("prior cases will sometimes be binding because of issue preclusion") (citing *Markman*, 517 U.S. at 391). "Issue preclusion generally refers to the effect of a prior judgment in foreclosing successive litigation of an issue of fact or law actually litigated and resolved in a valid court determination essential to the prior judgment, whether or not the issue arises on the same or a different claim [for relief]." *New Hampshire v. Maine*, 532 U.S. 742, 748–49 (2001). "Issue preclusion prohibits a party from seeking another determination of the litigated issue in the subsequent action." *Soverain Software LLC v. Victoria's Secret Direct Brand Mgmt., LLC*, 778 F.3d 1311, 1315 (Fed. Cir. 2015) (quoting

State Farm Mut. Auto. Ins. Co. v. Logisticare Sols., LLC, 751 F.3d 684, 689 (5th Cir. 2014)). Issue preclusion applies only if four conditions are met:

> First, the issue under consideration in a subsequent action must be identical to the issue litigated in a prior action. Second, the issue must have been fully and vigorously litigated in the prior action. Third, the issue must have been necessary to support the judgment in the prior case. Fourth, there must be no special circumstance that would render preclusion inappropriate or unfair.

State Farm, 751 F.3d at 689. Ultimately, issue preclusion is an "equitable doctrine" and the "discretion vested in trial courts to determine when it should be applied is broad." *Nations v. Sun Oil Co.*, 705 F.2d 742, 744 (5th Cir. 1983) (citing *Parklane Hosiery Co., Inc. v. Shore*, 439 U.S. 322, 331 (1979)).

III. AGREED CONSTRUCTIONS

The parties have agreed to constructions set forth in their Revised Joint Claim Construction Chart Pursuant to Patent Rule 4-5(d). Dkt. No. 108. Based on the parties' agreement, the Court hereby adopts the agreed constructions for this case.

IV. CONSTRUCTION OF DISPUTED TERMS

A. "a plurality of signals" and "a microprocessor for generating a plurality of control signals used to operate said system, said microprocessor creating a plurality of reprogrammable communication protocols"

Disputed Term[3]	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a microprocessor for generating a plurality of control signals used to operate said system, said microprocessor creating a plurality of reprogrammable communication protocols" • '467 Patent Claim 1, 34	a microprocessor configured to generate a plurality of control signals used to operate said system and configured to create a plurality of [reprogrammable] communication protocols	a microprocessor configured to bring into existence two or more control signals used to operate said system and configured to bring into existence two or more [reprogrammable] communication protocols

[3] For all term charts in this order, the claims in which the term is found are listed with the term but: (1) only the highest-level claim in each dependency chain is listed, and (2) only asserted claims

Disputed Term[3]	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a plurality of control signals" • '467 Patent Claims 1, 34	to the extent not covered by this Court's construction in the HTC Case, plain and ordinary meaning	two or more signals

Because the parties' arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties' Positions

Plaintiff submits: This term should be construed as the Court construed it in the HTC Case (citing *HTC CC Order* at 15–22). Specifically, it would be improper to construe "generating" control signals and "creating" protocols in the term to require the microprocessor bring the signals and protocols into existence. Indeed, the Court rejected such an interpretation in the HTC Case and there noted that "the creation of new 'rules' for communicating . . . would defeat the purpose of the invention—to facilitate communication with different third-party external devices" (quoting *HTC R&R* at 8–9). Finally, construing "plurality" as "two or more" improperly deviates from the ordinary and customary meaning of "plurality." Dkt. No. 97 at 16–17, 20.

In addition to the claims themselves, Plaintiff cites the following intrinsic and extrinsic evidence to support its position: **Intrinsic evidence**: '467 Patent col.8 ll.22–30, col.8 ll.60–65, col.16 ll.40–45; '467 Patent File Wrapper October 31, 1997 Amendment at 1–2, 10 (Plaintiff's Ex. B, Dkt. No. 97-3 at 2–3, 11), February 17, 1998 Notice of Allowability at 2 (Plaintiff's Ex. C, Dkt. No. 97-4 at 3).

identified in the parties' Revised Joint Claim Construction Chart Pursuant to Patent Rule 4-5(d) (Dkt. No. 108) are listed. Based on Plaintiff's statement in its opening claim construction brief, the Court understands that the asserted claims are Claims 1–7, 27–30 and 34. Dkt. No. 97 at 7. Of these, Claims 1 and 34 are independent and the others are dependent claims.

Defendants respond: The claim terms "create" and "generate" and variants mean to bring something into existence, thus the microprocessor term is directed to bringing signals and protocols into existence. Further, the plain and ordinary meaning of "plurality" is "two or more." Dkt. No. 102 at 8–9, 13, 17–18.

In addition to the claims themselves, Defendants cite the following intrinsic and extrinsic evidence to support their position: **Intrinsic evidence**: '467 Patent col.7 ll.14–19. **Extrinsic evidence**: *Webster's New World College Dictionary* (3d ed. 1996), "create" and "generate" (Defendants' Ex. C, Dkt. No. 102-4 at 4–5).

Plaintiff replies: As described in the '467 Patent, the claimed invention is directed to facilitating communication with third-party devices, and the manufacturers of those devices determine the communication protocols and command sets for those devices. In other words, it is the manufacturer of those devices, not the recited microprocessor, that brings the protocols and command sets into existence. Further, "plurality" in the microprocessor term "is not a quantification but rather simply refer[s] to a variety/various (and is used interchangeably with these terms) control signals used to communicate with different third-party external devices." Dkt. No. 103 at 4–6.

Plaintiff cites further **intrinsic evidence** to support its position: '467 Patent col.7 ll.37–60, col.8 ll.52–54, col.11 ll.15–19, col.16 ll.42–46.

Analysis

There are two issues in dispute. The first issue is whether "generating" signals and "creating" protocols requires bringing the signals and protocols into existence. To the extent that Defendants contend that "generating" and "creating" in the term somehow precludes the use of signals and protocols that are previously defined, the Court rejects Defendants' "bring into existence"

construction. The second issue is whether the "plurality" of signals and protocols necessarily refers to two or more signals and protocols. It does.

In the HTC Case, the Court directly addressed the issue of whether "generating" or "creating" in the claims requires bringing new protocols into existence and thereby excludes systems that utilize predefined third-party protocols. *HTC R&R* at 8–9. The Court there held as follows:

> In describing the microprocessor, the specification notes one embodiment is "configured to utilize several communication protocols employed by various manufacturers or various models of the same brand." '467 Patent at 7:37–39. But nowhere does the specification teach the creation of new "rules" for communicating, which would defeat the purpose of the invention—to facilitate communication with different third-party external devices.

Id. The position that Defendants here advocate is the same as that rejected by the Court in the HTC Case. The Court reiterates the reasoning and ruling set forth in *HTC R&R* and rejects Defendants' proposed construction regarding "create," "generate," and variants of those words.

The Court rejects Plaintiff's position that "plurality of control signals" and "plurality of reprogrammable communication protocols" is satisfied by a single control signal or communication protocol, respectively. The Federal Circuit has instructed that "'plurality' when used in a claim, refers to two or more items, absent some indication to the contrary." *Dayco Prods. v. Total Containment, Inc.*, 258 F.3d 1317, 1328 (Fed. Cir. 2001). In other words, the plain and ordinary meaning of plurality is "two or more." The context in which "plurality" is used may indicate that the term is used other than according to this plain and ordinary meaning to "describe a universe ranging from one to some higher number, rather than requiring more than one item." *See Versa Corp. v. Ag-Bag Int'l Ltd.*, 392 F.3d 1325, 1330 (Fed. Cir. 2004). Plaintiff has not established any context in the '467 Patent that indicates "plurality" is meant to encompass the singular. The fact that "plurality" in the patent indicates a "variety" of control signals or protocols suggests just the opposite of Plaintiff's position. Instead of indicating that "plurality" includes a

singular signal or protocol, the patent teaches that plurality indicates a variety of signals or protocols, meaning several. For example, the patent provides:

> One embodiment of handset 10, in accordance with the present invention, is ***configured to communicate with <u>various</u> devices such as TV sets***. VCR sets, CD players, and Cable boxes. The handset is further ***configured to utilize <u>several</u> communication protocols*** employed by various manufacturers or various models of the same brand. Typically, ***each manufacturer*** of one of these devices such as TV sets, VCR sets, CD players and Cable boxes, ***employs a specific communication protocol that includes a command code set for performing <u>various</u> functions*** to remotely control the device. ***Each command code set comprises <u>a set of signals</u>, wherein each signal is utilized to perform an available function***. For example, a TV set made by manufacturer A, may require a command code set that includes various signals to remotely control various available functions such as channel up, channel down, volume up, volume down, mute, and power "on" and "off". This command code set may have a different set of signals than another command code set employed for a TV set made by manufacturer B. In the alternative, manufacturer A may employ different command code sets for its own various models of TV sets.

'467 Patent col.7 ll.34–54 (emphasis added). Ultimately, Plaintiff fails to identify any context that indicates "plurality" in the claims is used other than according to its plain and ordinary meaning of "two or more."

Accordingly, the Court construes these terms as follows:

- "a plurality of signals" means "two or more signals"; and
- "a microprocessor for generating a plurality of control signals used to operate said system, said microprocessor creating a plurality of reprogrammable communication protocols" means "a microprocessor configured to generate two or more control signals used to operate said system and configured to create two or more reprogrammable communication protocols."

B. The Selector Terms

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a selector controlled by said microprocessor for enabling said radio frequency transceiver and said infra-red frequency transceiver to transmit a desired command code set generated by said microprocessor via either radio frequency signals and infra-red signals as desired, and to receive a signal from any one of said external devices via either radio frequency signals and infra-red signals" • '467 Patent Claim 2	a selector controlled by said microprocessor for enabling said radio frequency transceiver and said infra-red frequency transceiver to transmit a desired command code set generated by said microprocessor via either radio frequency signals and infra-red signals as selected by a user, and to receive a signal from any one of said external devices via either radio frequency signals and infra-red signals	a multiplexer/demultiplexer controlled by said microprocessor for enabling said radio frequency transceiver and said infra-red frequency transceiver to transmit a desired command code set generated by said microprocessor via either radio frequency signals and infra-red signals as desired, and to receive a signal from any one of said external devices via either radio frequency signals and infra-red signals
"selector" • '467 Patent Claim 2	to the extent not covered by this Court's construction in the HTC Case, plain and ordinary meaning	a multiplexer/demultiplexer

Because the parties' arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties' Positions

Plaintiff submits: These terms should be construed as the Court construed them in the HTC Case (citing *HTC CC Order* at 31–36). Specifically, it would be improper to construe "selector" as "multiplexer/demultiplexer," which terms do not appear in the '467 Patent. Dkt. No. 97 at 17–19.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '467 Patent figs.1b, 3, 5, col.1 ll.50–52, col.20 ll.2–17, col.20 ll.41–56; '467 Patent

File Wrapper October 31, 1997 Amendment at 5, 11, 13–14 (Plaintiff's Ex. B, Dkt. No. 97-3 at 6, 12, 14–15).

Defendants respond: The "selector" of '467 Patent is described as providing "full two way RF and IR communication links" and is depicted as including two-way connections to both RF (radio frequency) and IR (infrared) transceivers. As described, the selector routes received RF and IR signals from the appropriate transceiver to a common path, and routes RF and IR signals from a common path to the appropriate transceiver for transmission. Thus, the defining nature of the selector is that, when receiving, it selects between multiple inputs (both IR and RF) to route to a single output, and when transmitting, it selects between multiple outputs (both IR and RF) to route from a single input. This is a multiplexer/demultiplexer. Dkt. No. 102 at 9–11.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '467 Patent fig.3, col.1 ll.50–52, col.20 ll.11–17, col.20 ll.40–46, col.20 ll.49–50, col.20 ll.60–63, col.23 ll.23–29, col.23 ll.32–38, col.23 ll.51–55, col.24 ll.25–28.

Plaintiff replies: Nothing identified by Defendants supports narrowing "selector" to a multiplexer/demultiplexer. Dkt. No. 103 at 6–7.

Analysis

The issue in dispute distills to whether the "selector" is, as a matter of claim construction, necessarily a multiplexer/demultiplexer. It is not.

The "selector" is not necessarily a "multiplexer/demultiplexer." Defendants' argument is essentially that the only "selector" embodiment in the '467 Patent has two transceivers connected to a single common path through the selector and thus the selector is limited to this embodiment. Defendants' have not, however, established that the claims are necessarily limited to such an arrangement. *See Phillips*, 415 F.3d at 1323 ("In particular, we have expressly rejected the

contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment."); *see also*, *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012) ("It is likewise not enough that the only embodiments, or all of the embodiments, contain a particular limitation. We do not read limitations from the specification into claims; we do not redefine words. Only the patentee can do that."). While it is plain from the claim language that the selector enables selection between RF and IR signals ("transmit a desired command code set generated by said microprocessor via either radio frequency signals and infra-red signals as desired"), the claims are silent on whether the RF and IR transceivers are coupled to a common path through the selector. Further, neither "multiplexer" nor "demultiplexer" are used anywhere in the patent. Thus, even if "multiplexer" and "demultiplexer" carry the meanings Defendants accord them (without evidence), injecting the terms into the construction is not supported.

Accordingly, the Court determines that "selector" has its plain and ordinary meaning without the need for further construction and construes the "a selector controlled by …" term as follows:

- "a selector controlled by said microprocessor for enabling said radio frequency transceiver and said infra-red frequency transceiver to transmit a desired command code set generated by said microprocessor via either radio frequency signals and infra-red signals as desired, and to receive a signal from any one of said external devices via either radio frequency signals and infra-red signals" means "a selector controlled by said microprocessor for enabling said radio frequency transceiver and said infra-red frequency transceiver to transmit a desired command code set generated by said microprocessor via either radio frequency signals and infra-red signals as selected by a user, and to receive a

signal from any one of said external devices via either radio frequency signals and infra-red signals."

C. "a communication protocol"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a communication protocol" • '467 Patent Claims 1, 34	plain and ordinary meaning	a defined set of rules and formats that allows devices to communicate with each other

The Parties' Positions

Plaintiff submits: This term should be construed as the Court construed it in the HTC Case (citing *HTC CC Order* at 42–46). Specifically, and as previously held by the Court, it would be improper inject a "set of rules" limitation into the construction. Dkt. No. 97 at 19–20.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '467 Patent col.7 ll.14–25, col.7 ll.37–54; '467 Patent File Wrapper October 31, 1997 Amendment at 1–2, 10 (Plaintiff's Ex. B, Dkt. No. 97-3 at 2–3, 11).

Defendants respond: As described in the '467 Patent, communication protocols define the device-specific rules and formats for communication between devices. This comports with the customary meaning of the term in the art of telecommunications. Dkt. No. 102 at 11–13.

In addition to the claims themselves, Defendants cite the following intrinsic and extrinsic evidence to support their position: **Intrinsic evidence**: '467 Patent col.7 ll.14–21, col.7 ll.40–44. **Extrinsic evidence**: *Newton's Telecom Dictionary* at 1013–14 (30th ed. 2016), "protocol" (Defendants' Ex. A, Dkt. No. 102-2 at 4–5).

Plaintiff replies: As the Court stated in the HTC Case, the term "'communication protocol' is sufficiently defined by the claim language" (quoting *HTC CC Order* at 46). Dkt. No. 103 at 7.

Analysis

The issue in dispute is whether the "communication protocol" of the claims is limited to "rules and formats" that enable communication. It is not.

The issue here is substantially similar to the issue addressed by the Court in the HTC Case. There, the Court refused to construe "communication protocols" as "sets of rules that allow for two or more devices to communicate wirelessly with one another using a command code set to produce an action in a remotely controlled external device" and held:

> The Court is not persuaded by Defendant's arguments given that nothing in the intrinsic record requires Defendant's construction. ***For example, the term "rules" or "set of rules" is never mentioned in the intrinsic record, and the inclusion of such terms would add ambiguity and/or confusion to this term***. Overall, ***the intrinsic record is consistent with the claims in defining the communication protocol in relation to the command code set***. In effect, Defendant is trying to redefine the "command code set" term rather than defining the "communication protocol" term. Defendant's attempt to separately define both "communication protocols" and "command code set" using similar language / limitations makes such limitations redundant and/or superfluous.
>
> Overall, the Court finds "communication protocol" is sufficiently defined by the claim language and, in particular, the "command code set" limitation. Nothing else is needed. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) ("Claim construction is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims, for use in the determination of infringement. It is not an obligatory exercise in redundancy."); *see also O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) ("[D]istrict courts are not (and should not be) required to construe every limitation present in a patent's asserted claims.") (*citing U.S. Surgical*, 103 F.3d at 1568).

HTC CC Order at 45–46 (emphasis added). The Court there noted that a "communication protocol" of the claims is defined by its "command code set." *Id*. at 39 ("each independent claim specifies that 'each communication protocol includes a command code set that defines the signals that are employed to communicate with each one of said external devices'"). This nature of the protocol is repeated in the description of the invention. *See, e.g.*, '467 Patent col.7 ll.40–44 ("Typically, each manufacturer of one of these devices such as TV sets, VCR sets, CD players and

Cable boxes, employs a specific communication protocol that includes a command code set for performing various functions to remotely control the device."); *see also*, *HTC CC Order* at 40 (quoting this passage).

The Court is not persuaded that its holding or reasoning in the HTC Case is incorrect and should be supplanted by Defendants' current proposal. For example, Defendants propose "a defined set of rules and formats" but their extrinsic evidence states that a protocol is "a set of rules governing the format." *Newton's Telecom Dictionary* at 1013, Dkt. No. 102-2 at 5. How is a "set of rules and formats" different from a "set of rules governing the format"? The variance between Defendants' proposal and the extrinsic evidence proffered in support of that proposal exacerbates the "ambiguity and/or confusion" that the Court previously determined would result from injecting "rules" or "set of rules" into the construction. *HTC CC Order* at 45. For example, does the command code set itself set forth the "rules and formats" of the communication? If not, what else is required? Ultimately, the Court reiterates the reasoning and ruling set forth in the *HTC CC Order*: "'communication protocol' is sufficiently defined by the claim language and, in particular, the 'command code set' limitation. Nothing else is needed." *Id*. at 46.

Accordingly, the Court determines that "communication protocol" has its plain and ordinary meaning without the need for further construction.

D. "a plurality of reprogrammable communication protocols"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a plurality of reprogrammable communication protocols" • '467 Patent Claims 1, 34	to the extent not covered by this Court's construction in the HTC Case, plain and ordinary meaning	Indefinite. Protocols cannot be reprogrammable. Alternatively: • two or more communication protocols whose rules and formats can be changed through programming

The Parties' Positions

Plaintiff submits: In the HTC Case, the Court construed "a plurality of reprogrammable communication protocols" in the context of the "a microprocessor for generating …" phrase, and gave the term its plain and ordinary meaning (citing *HTC CC Order* at 15–22). Here, Defendants have not provided any evidence that a communication protocol cannot be reprogrammable and therefore fail to establish by clear and convincing evidence that this term renders any claim indefinite. Further, Defendants' alternative construction is improperly narrow. Dkt. No. 97 at 27–28.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '467 Patent col.8 ll.22–30, col.8 ll.60–65, col.16 ll.40–45; '467 Patent File Wrapper October 31, 1997 Amendment at 1–2 (Plaintiff's Ex. B, Dkt. No. 97-3 at 2–3).

Defendants respond: A "communication protocol" is not a "program" and therefore is not reprogrammable. Specifically, Plaintiff represented to the PTAB in an IPR proceeding that "reprogrammable" in the '467 Patent refers to "a program that can be replaced with another." In the patent, however, a "communication protocol" is created by a program but is not itself a program. Thus, it cannot be reprogrammable. Dkt. No. 102 at 14–15.

In addition to the claims themselves, Defendants cite the following intrinsic and extrinsic evidence to support their position: **Intrinsic evidence**: '467 Patent col.7 ll.14–19; Patent Owner's Preliminary Response, *HTC Corp. et al. v. Joe Andrew Salazar*, IPR2018-00273 (P.T.A.B. Apr. 11, 2018), Paper No. 10 at 3 (Defendants' Ex. B, Dkt. No. 102-3 at 11). **Extrinsic evidence**: *Newton's Telecom Dictionary* at 1013–14 (30th ed. 2016), "protocol" (Defendants' Ex. A, Dkt. No. 102-2 at 4–5).

Plaintiff replies: As the Court previously determined in the HTC Case, the meaning of this term is plain to a person of ordinary skill in the art without construction. Further, "plurality" here, as in "plurality of control signals," "is not a quantification but rather a reference to a variety/various communication protocols." Dkt. No. 103 at 7–8.

Analysis

There are two issues in dispute. The first issue is whether "reprogrammable communications protocol" renders the claims indefinite because a protocol is technologically not reprogrammable. It does not. The second issue is whether "plurality" necessarily refers to "two or more." It does.

The Court rejects Defendants' contention that Plaintiff's IPR statement somehow renders any claim indefinite. For example, the '467 Patent states that "each [device] manufacturer . . . employs a specific communication protocol that includes a command code set for performing various functions to remotely control the device. Each command code set comprises a set of signals, wherein each signal is utilized to perform an available function." '467 Patent col.7 ll.40–44. Thus, it can fairly be stated that a communication protocol includes a set of instructions for performing functions and Plaintiff broadly used "program" in the IPR proceeding to encompass such a set.

The Court also rejects the phrase "whose rules and formats can be changed through programming" in Defendants' alternative construction. As set forth above, "rules and formats" is not a useful, or proper, construction of "communication protocol." Further, Defendants' "through programming" phrase presupposes that "program" and "communication protocol" are necessarily mutually exclusive terms, which presupposition the Court rejects.

Finally, and as set forth in the discussion of the "a microprocessor for generating a plurality …" term, "plurality" is used in the claims to denote "two or more."

Accordingly, the Court holds that Defendants have not proven any claim indefinite for including the phrase "reprogrammable communications protocol" and construe the term as follows:

- "a plurality of reprogrammable communication protocols" means "two or more reprogrammable communication protocols."

E. "such that the memory space required to store said parameters is smaller than the memory space required to store said command code sets"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"such that the memory space required to store said parameters is smaller than the memory space required to store said command code sets" • '467 Patent Claim 1	to the extent not covered by this Court's construction in the HTC Case, plain and ordinary meaning	indefinite

The Parties' Positions

Plaintiff submits: This term should be construed to have its plain and ordinary meaning as the Court construed it in the HTC Case (citing *HTC CC Order* at 22–30). The only indefiniteness position provided by Defendants appears to be that the term is part of a "memory device" limitation that is governed by 35 U.S.C. § 112, ¶ 6. This exact issue was addressed and rejected by the Court in the HTC Case. Dkt. No. 97 at 28–29.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '467 Patent col.8 ll.22–30, col.8 ll.60–65, col.16 ll.40–45; '467 Patent File Wrapper October 31, 1997 Amendment at 1–2, 10–12 (Plaintiff's Ex. B, Dkt. No. 97-3 at 2–3, 11–13).

Defendants respond: The phrase "said parameters" lacks antecedent basis. Specifically, the claim recites "a plurality of parameter sets" and then "said parameters." Thus, it is not clear if "said

parameters" refers to the parameter sets at all, to the entirety of the sets, to one of the sets, or to just some of the parameters within the sets. Dkt. No. 102 at 16–17.

Plaintiff replies: As the Court recognized in the HTC Case, the '467 Patent uses "parameters" interchangeably with "parameter sets" (quoting *HTC CC Order* at 46–49). Thus, "said parameters" in the claims refers to the earlier-recited "parameter sets." Dkt. No. 103 at 8–9.

Plaintiff cites further **intrinsic evidence** to support its position: '467 Patent col.8 ll.22–30.

Analysis

The issue in dispute is whether the meaning of "said parameters" is reasonably certain in the context of the claims and the description of the invention. It is. It refers to the earlier-recited "parameter sets."

Read in the proper context, it is reasonably certain that "said parameters" refers to the earlier recited "plurality of parameter sets." The '467 Patent notes one issue of supporting communications with a variety of devices is the memory required to store the command sets for the various devices. *See, e.g.*, '467 Patent col.7 l.55 – col.8 l.17 (it "requires a substantially large memory to store all the command code sets with various sets of signals"). To address this issue, a control device "in accordance with the present invention employs an encoding technique to store the desired signals in a memory space." *Id*. at col.8 ll.17–21. Specifically, the memory of the control device "in accordance with the present invention . . . is configured so as to ***store a finite set of parameters*** that may be used to recreate and generate signals corresponding to a desired ***command code set***. ***These parameters*** take substantially less memory space than if the entire signal were to be stored." *Id*. at col.8 ll.22–30 (emphasis added); *see also id*. at col.8 ll.36–54 ("each command code set is represented by parameters stored in an array . . .. This arrangement leads to a substantial reduction in memory space required to store parameters corresponding to various

command code sets."). In other words, the patent teaches representing a command code set with a smaller parameter set. The benefit taught is not that some subset of the parameter set requires less memory than the entirety of the command code set but rather that the entirety of the parameter set requires less memory than the entirety of the command code set. This enables the system to generate any desired command-code-set signal from the parameter set while requiring less memory than storing the command code set itself.

The language used to describe the memory-saving aspect of the invention is paralleled in the claim at issue: "a memory device coupled to said microprocessor configured to ***store a plurality of parameter sets*** retrieved by said microprocessor so as to recreate a desired command code set, such that the memory space required to ***store said parameters*** is smaller than the memory space required to store said ***command code sets***." *Id*. at col.26 ll.1–6. In the context of the description of the invention, it is reasonably certain that "said parameters" in the claims, like the "parameters" in the description of the invention, refer to the parameter sets that allow recreation of the command code sets and require less memory than the command code sets.

Accordingly, the Court holds that Defendants have not proven any claim is indefinite for including "said parameters" and construes the term as follows:

- "such that the memory space required to store said parameters is smaller than the memory space required to store said command code sets" means "such that the memory space required to store said plurality of parameter sets is smaller than the memory space required to store said command code sets."

F. "a desired command code set"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a desired command code set" • '467 Patent Claim 1	to the extent not covered by this Court's construction in the HTC Case, plain and ordinary meaning	a different command code set than the command code set that defines the signals that are employed to communicate with each one of said external devices alternatively, • indefinite for lacking antecedent basis

The Parties' Positions

Plaintiff submits: This term should be construed to have its plain and ordinary meaning as the Court construed it in the HTC Case (citing *HTC CC Order* at 22–30). Defendants' proposed construction is improperly limiting and their alternative argument that the term renders claims indefinite for lack of antecedent basis is not supported by the requisite evidence. Dkt. No. 97 at 29–30.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '467 Patent col.8 ll.22–30, col.8 ll.60–65, col.16 ll.40–45; '467 Patent File Wrapper October 31, 1997 Amendment at 1–2, 10–12 (Plaintiff's Ex. B, Dkt. No. 97-3 at 2–3, 11–13).

Defendants respond: The term "a desired command code set" is necessarily different from the "a command code set that defines the signals that are employed to communicate with each one of said external devices" earlier recited in the claim for two reasons. First, the two command code sets are separately recited in the claim. Second, the claims recite "a desired command code set" rather than "the command code set," indicating that they are not the same command code set. "Absent that construction, . . . this term is indefinite for lacking antecedent basis." Dkt. No. 102 at 19–20.

Plaintiff replies: The only restriction on the "desired command code set" is that it is "recreated from the retrieved parameter sets." Dkt. No. 103 at 9.

Plaintiff cites further **intrinsic evidence** to support its position: '467 Patent col.7 l.55 – col.8 l.65, col.16 ll.25–46.

Analysis

The issue in dispute is whether "a desired command code set" is necessarily different from the command code set earlier recited in the phrase "each communication protocol includes a command code set that defines the signals that are employed to communicate with each one of said external devices." It is not; and this does not render any claim indefinite.

Claim 1 provides significant context to inform the understanding of "a desired command code set." Specifically, the claim provides:

> a microprocessor for generating a plurality of control signals used to operate said system, said microprocessor creating a plurality of reprogrammable communication protocols, for transmission to said external devices wherein ***each communication protocol includes a command code set that defines the signals that are employed to communicate with each one of said external devices***;
>
> a memory device coupled to said microprocessor configured to store a plurality of parameter sets retrieved by said microprocessor so as to ***recreate a desired command code set***, such that the memory space required to store said parameters is smaller than the memory space required to store ***said command code sets;***
>
> a user interface coupled to said microprocessor for sending a plurality of signals corresponding to user selections to said microprocessor and displaying a plurality of menu selections available for the user's choice, said microprocessor ***generating a communication protocol in response to said user selections***; and
>
> an infra-red frequency transceiver coupled to said microprocessor for ***transmitting to said external devices and receiving from said external devices***, infra-red frequency signals in accordance with said communications protocols.

'467 Patent col.25 l.60 – col.26 l.18 (emphasis added). Plainly, there are a plurality of communication protocols and thus there are a plurality of "command code sets" that define the communication signals that are employed to communicate with each one of said external devices.

While the communication-signal-defining command code sets are recited distinctly from "a desired command code set," there is nothing in a plain reading of the claim language the precludes the desired set from being one of the communication-signal-defining command code sets. Indeed, and as discussed above, the '467 Patent teaches the command sets are recreated from parameters to reduce the amount of required memory—it takes less memory to store the parameters used to recreate the command sets than to store the command sets. In this light, one would expect that that the "desired command code set" that is recreated from the stored parameters may be one of the command code sets that defines the communication signals.

Accordingly, the Court holds that Defendants have failed to prove any claim is indefinite for including "a desired command code set" and further rejects Defendants' proposed construction. The Court therefore determines that this term has its plain and ordinary meaning without the need for further construction.

G. "a microprocessor for generating …, said microprocessor creating …, a plurality of parameter sets retrieved by said microprocessor …, said microprocessor generating …"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a microprocessor for generating …, said microprocessor creating …, a plurality of parameter sets retrieved by said microprocessor …, said microprocessor generating …" • '467 Patent Claims 1, 34	to the extent not covered by this Court's construction in the HTC Case, plain and ordinary meaning	one or more microprocessors, each of which must perform the generating, creating, retrieving, and generating functions

The Parties' Positions

Plaintiff submits: This term should be construed to have its plain and ordinary meaning, subject to the Court's previous constructions in the HTC Case (citing *HTC CC Order* at 15–30).

Defendants' proposed construction is improperly limiting in that it requires that the microprocessor "must perform" the functions. As the Court explained in the HTC Case, the claims are directed to capability, and do not require actual performance of the functions. Dkt. No. 97 at 21–23.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '467 Patent col.7 ll.37–39, col.8 ll.22–30, col.8 ll.60–65, col.16 ll.40–45; '467 Patent File Wrapper October 31, 1997 Amendment at 1–2 (Plaintiff's Ex. B, Dkt. No. 97-3 at 2–3), February 17, 1998 Notice of Allowability at 2 (Plaintiff's Ex. C, Dkt. No. 97-4 at 3).

Defendants respond: The claims are directed to capability, and do not require actual performance, and the claims do not exclude systems of multiple microprocessors. The claims, however, require a (singular) microprocessor that is capable of performing all the recited microprocessor functions. In other words, the claims require that the same microprocessor that is capable of the recited "generating" is also capable of the later-recited "creating," "retrieving," and "generating." This does not encompass a system in which no single microprocessor is capable of performing all the recited functions, even if the system includes multiple microprocessors that in the aggregate are capable of performing all the recited functions. Dkt. No. 102 at 21–23.

Plaintiff replies: The claims are open-ended "comprising" claims and "a microprocessor" means "one or more microprocessors." This means "that any one of the one or more microprocessors can be capable of performing any one of the recited functions in this claim term, and any individual one of the microprocessors (or all the microprocessors) need not be capable of performing all of the recited functions." Dkt. No. 103 at 9–10.

Analysis

The issue in dispute distills to whether the claims require one microprocessor that is capable of performing the recited "generating," "creating," "retrieving," and "generating" functions. They

do. The plain reading of the claims is that the same microprocessor is capable of performing all the recited functions attributed to "said microprocessor."

The claims provide significant context to inform the understanding of the "microprocessor" phrases. For example, Claim 1 provides:

> **1**. A communications, command, control and sensing system for communicating with a plurality of external devices comprising:
>
> ***a microprocessor for generating*** a plurality of control signals used to operate said system, ***said microprocessor creating*** a plurality of reprogrammable communication protocols, for transmission to said external devices wherein each communication protocol includes a command code set that defines the signals that are employed to communicate with each one of said external devices;
>
> ***a memory device coupled to said microprocessor*** configured to store a plurality of ***parameter sets retrieved by said microprocessor*** so as to recreate a desired command code set, such that the memory space required to store said parameters is smaller than the memory space required to store said command code sets;
>
> ***a user interface coupled to said microprocessor*** for ***sending*** a plurality of signals corresponding to user selections ***to said microprocessor*** and displaying a plurality of menu selections available for the user's choice, ***said microprocessor generating*** a communication protocol in response to said user selections; and
>
> an ***infra-red frequency transceiver coupled to said microprocessor*** for transmitting to said external devices and receiving from said external devices, infra-red frequency signals in accordance with said communications protocols.

'467 Patent col.25 l.57 – col.26 l.18 (emphasis added). Thus, the claimed system includes "a microprocessor" having various structural characteristics defined by its functions and by its relationships to other structural limitations. Claim 34 is similar in this respect. Plaintiff contends that "a microprocessor" of the claims, because it means "one or more microprocessors," encompasses a plurality of microprocessors that in the aggregate satisfy the functional (and presumably relational) limitations. For example, Plaintiff contends that Claim 1 encompasses a multi-microprocessor system in which no single microprocessor is configured "for generating" control signals, for "creating" reprogrammable communication protocols, for "retriev[ing]"

parameter sets, and for "generating" a communication protocol in response to a user selection. Plaintiff's argument also necessarily implies that no single microprocessor is "coupled to" a memory device, a user interface, and an infra-red frequency transceiver. Rather, Plaintiff contends that each recited microprocessor limitation may be satisfied by a different microprocessor.

The Court agrees with Defendants that under Federal Circuit precedent, at least one microprocessor must satisfy all the functional (and relational) limitations recited for "said microprocessor." The parties dispute the import of two Federal Circuit opinions: *Convolve, Inc. v. Compaq Computer Corp.*, 812 F.3d 1313 (Fed. Cir. 2016) and *In re Varma*, 816 F.3d 1352 (Fed. Cir. 2016). Both opinions involve interpretation of a claim element introduced with the indefinite article "a" and further defined by claim-recited characteristics of the element. Both opinions hold that claim language alone may require a singular element to have all recited characteristics. *Convolve* states that starting position of such an interpretation:

> This court has repeatedly emphasized that an indefinite article "a" or "an" in patent parlance carries the meaning of "one or more" in open-ended claims containing the transitional phrase "comprising." … The exceptions to this rule are extremely limited: a patentee must evince a clear intent to limit "a" or "an" to "one."

Convolve, 812 F.3d at 1321 (quotation and modification marks omitted). In the context of interpreting "a processor" defined simply by enumerated functions that it executes, *Convolve* found no intent to limit the claims (claim 9 and 15) to one processor performing all the functions. *Id*. In the context of interpreting "[u]ser interface for . . . working with a processor . . . comprising" in other claims (claims 1, 3, and 5), however, *Convolve* found an intent to limit "a processor" to a singular processor having all the claim-recited characteristics:

> Here, unlike claims 9 and 15, the language and structure of claim 1 demonstrate a clear intent to tie the processor that "output[s] commands to the data storage device" to the "user interface." Specifically, claim 1 recites "a processor" in the preamble before recitation of "comprising," and the claim body uses the definite article "the" to refer to the "processor." This reference to "the processor," referring back to the "a processor" recited in preamble, supports a conclusion that the recited user

> interface is "operatively working with" the same processor to perform all of the recited steps. In other words, the claim language requires a processor associated with the user interface to issue the shaped commands of the claims. Given this claim language, which contrasts with the claims described above that allow for multiple processors, we conclude that claims 1, 3, and 5 require the user interface to work with a single processor in performing all of the claim steps.

Id. *Varma*, in the context of interpreting "a statistical analysis request corresponding to two or more selected investments," similarly found that a single "statistical analysis request" must correspond to two or more selected investments:

> But while "a" sometimes is non-restrictive as to number, permitting the presence of more than one of the objects following that indefinite article, context matters even as to whether the word has that meaning.. . . And here the question is not whether there can be more than one request in a claim-covered system: there can. Rather, the question is whether "a" can serve to negate what is required by the language following "a": a "request" (a singular term) that "correspond[s]" to "two or more selected investments." It cannot. For a dog owner to have "a dog that rolls over and fetches sticks," it does not suffice that he have two dogs, each able to perform just one of the tasks. In the present case, no matter how many requests there may be, no matter the variety of the requests the system may receive, the system must be adapted to receive a request that itself corresponds to at least two investments.

Varma, 816 F.3d at 1362–63. Thus, while a claim element introduced by an indefinite article and further defined by claim-recited characteristics may not be limited to one instance of the element, the way in which the characteristics are recited may dictate that at least one instance of the element must have all the claim-recited characteristics.

In the claims at issue here, one "microprocessor" is set forth in the claims as including a variety of characteristics. The claim-recited characteristics are not just a simple listing of functions to be performed by "a microprocessor." Rather, the characteristics are repeatedly introduced using "said microprocessor." Those characteristics include the functions that "said microprocessor" is necessarily configured to perform as well as the structural relationship between "said microprocessor" and other structural elements. In this respect, the claims here are distinguishable from claims 9 and 15 addressed in *Convolve* and are analogous to claims 1, 3, and 5 addressed in

Convolve and the claim addressed in *Varma*. Notably, the repeated use of "said microprocessor" to enumerate the functional and relational characteristics of "a microprocessor" suggests that the same microprocessor that is "coupled to" various structural elements is the one that is configured to perform the various recited microprocessor functions. In other words, one microprocessor must have all the recited characteristics.

Accordingly, the Court construes this phrase as follows:

- "a microprocessor for generating …, said microprocessor creating …, a plurality of parameter sets retrieved by said microprocessor …, said microprocessor generating …" means "one or more microprocessors, at least one of which is configured to perform the generating, creating, retrieving, and generating functions."

H. "said communications protocols" and "said microprocessor generating a communication protocol in response to said user selections"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"said microprocessor generating a communication protocol in response to said user selections"[4] • '467 Patent Claims 1, 34	to the extent not covered by this Court's construction in the HTC Case, plain and ordinary meaning	said microprocessor generating a communication protocol different from the reprogrammable communication protocols alternatively, • indefinite
"said communications protocols" • '467 Patent Claims 1, 34	plain and ordinary meaning	indefinite

[4] The parties identify the term with the singular "selection," the claims recite "selections." Dkt. No. 108-1 at 53–56.

Because the parties' arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties' Positions

Plaintiff submits: These terms should be construed to have their plain and ordinary meanings consistent with the Court's construction of "communication protocol" in the HTC Case (citing *HTC CC Order* at 42–46). Defendants' proposed construction of "said microprocessor generating a communication protocol in response to said user selections" is improperly limiting and Defendants have not provided the requisite evidence to establish that either term renders any claim indefinite. Dkt. No. 97 at 30–31.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '467 Patent col.7 ll.14–25, col.7 ll.37–54; '467 Patent File Wrapper October 31, 1997 Amendment at 1–2, 10 (Plaintiff's Ex. B, Dkt. No. 97-3 at 2–3, 11).

Defendants respond: The term "a communication protocol" is necessarily different from the "a plurality of reprogrammable communication protocols" earlier recited in the claim for two reasons. First, the terms are separately recited in the claims. Second, the claims recite "a communication protocol," using the indefinite article "a" rather than the definite article "the," indicating that it is not referring to a previously recited "communication protocol." The term "said communications protocols" renders the claims indefinite as the claims recite multiple different communication protocols and it is not clear which one corresponds to "said communications protocols." Dkt. No. 102 at 23–24, 29–30.

Plaintiff replies: The claims recite that the microprocessor has the capability to create a "plurality of reprogrammable communication protocols" for communication with external devices and the term "said microprocessor generating a communication protocol in response to said user

selections" refers back to the earlier recited communication protocols. The term "said communications protocols" in the claims denotes that the generated protocol is for communication with external devices. Dkt. No. 103 at 11–12.

Analysis

There are two issues in dispute. The first issue is whether "a communication protocol" in the claims is necessarily different from a plurality of reprogrammable communication protocols recited earlier in the claims. It is not. The second issue is whether the meaning of "said communications protocols" is reasonably certain. It is; it refers to the plurality of reprogrammable communication protocols.

The communication protocol of "said microprocessor creating a plurality of reprogrammable communication protocols" is not necessarily different from the communication protocol of "said microprocessor generating a communication protocol in response to said user selections." This issue is similar to the difference between the "desired command code set" and the communication-signal-defining command sets addressed above. Again, the claims provide significant context to inform the proper understanding. For example, Claim 1 provides:

> a microprocessor for generating a plurality of control signals used to operate said system, ***said microprocessor creating a plurality of reprogrammable communication protocols***, for transmission to said external devices wherein ***each communication protocol includes a command code set that defines the signals that are employed to communicate with each one of said external devices***;
>
> a memory device coupled to said microprocessor configured to store a plurality of parameter sets retrieved by said microprocessor so as to recreate a desired command code set, such that the memory space required to store said parameters is smaller than the memory space required to store said command code sets;
>
> a user interface coupled to said microprocessor for sending a plurality of signals corresponding to user selections to said microprocessor and displaying a plurality of menu selections available for the user's choice, ***said microprocessor generating a communication protocol in response to said user selections***; and

> an infra-red frequency transceiver coupled to said microprocessor for ***transmitting to said external devices and receiving from said external devices***, infra-red frequency signals ***in accordance with <u>said communications protocols</u>***.

’467 Patent col.25 l.60 – col.26 l.18 (emphasis added). Plainly, there are a plurality of communication protocols that govern the communication with the external devices, each including a communication-signal-defining command set. While these reprogrammable communication protocols are recited distinctly from “a communication protocol” that is generated in response to user selections, there is nothing in a plain reading of the claim language the precludes the user-selected communication protocol from being one of the communication-governing communication protocols. Indeed, the ’467 Patent describes selecting and activating protocols from among stored communication protocols. *See, e.g.*, ’467 Patent col.19 ll.64–67 (“In response to touch sequences. modes of operation and communication protocols are selected as explained above in reference with FIG. 6.”), col.20 ll.7–11 (“Transmission and reception protocols are contained within microprocessor 30 and are activated based on the mode selection made via touch sensitive device 14. In this manner, handset 10 communicates with any number of external devices having compatible transceivers.”). Again, under a plain reading of the patent, one would expect that the communication protocol generated in response to the user selections may be one of the reprogrammable communication protocols that include the communication-signal-defining code sets.

The term “said communications protocols” in the claims refers back to the “reprogrammable communication protocols.” First, there is only one earlier recitation of the plural “communications protocols”; namely, the “plurality of reprogrammable communication protocols.” This commonality of protocol count suggests that the plural “communications protocols” refers to the “plurality of reprogrammable communication protocols.” Second, the reprogrammable communication protocols govern communication with external devices through their

communication-signal-defining command code sets and the transmitting and receiving (communicating) of the claim is in accord with "said communications protocols." This commonality of communication-governing function again suggests that the "said communications protocols" refers to the "plurality of reprogrammable communication protocols." Ultimately, when read in context, the meaning of "said communication protocols" is reasonably certain.

Accordingly, the Court holds that Defendants have not proven any claim is indefinite for including "said microprocessor generating a communication protocol in response to said user selections" or "said communications protocols." The Court further determines that "said microprocessor generating a communication protocol in response to said user selections" has its plain and ordinary meaning without the need for further construction and construes "said communications protocols" as follows:

- "said communications protocols" means "said plurality of reprogrammable communication protocols."

I. "an infra-red frequency transceiver coupled to said microprocessor for transmitting to said external devices and receiving from said external devices, infra-red frequency signals in accordance with said communications protocols"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"an infra-red frequency transceiver coupled to said microprocessor for transmitting to said external devices and receiving from said external devices, infra-red frequency signals in accordance with said communications protocols"[5]	to the extent not covered by this Court's construction in the HTC Case, plain and ordinary meaning	for each of the two or more external devices, the infra-red frequency transceiver must be capable of both transmitting to that device and receiving from that device, in accordance with said communications protocols

[5] The parties omit "infra-red frequency signals" from the term identified for construction. Dkt. No. 108-1 at 56–59.

• ’467 Patent Claims 1, 34		

The Parties’ Positions

Plaintiff submits: Subject to the Court’s constructions in the HTC Case, this term should be construed to have its plain and ordinary meaning (citing *HTC CC Order* at 31–36, 42–46). Indeed, the Court rejected Defendants’ proposed construction in the HTC Case, there noting that “[t]he limitation only requires that the IR transceiver be capable of sending and receiving IR signals to the plurality of external devices—not that it be capable of transmitting and sending to each device within that plurality” (quoting *HTC R&R* at 6–7). Dkt. No. 97 at 23–24.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: ’467 Patent figs.1b, 3, 5, col.1 ll.50–52, col.2 ll.17–20, col.7 ll.14–25, col.7 ll.37–54, col.20 ll.2–17, col.20 ll.41–56; ’467 Patent File Wrapper October 31, 1997 Amendment at 5, 10–11, 13–14 (Plaintiff’s Ex. B, Dkt. No. 97-3 at 6, 11–12, 14–15).

Defendants respond: The phrase “said external devices” refers to the earlier recited “plurality of external devices” thus the infra-red transceiver must be capable of transmitting to and receiving from each of the plurality of external devices. Dkt. No. 102 at 25.

Plaintiff replies: The Court should reject Defendants’ proposed construction here as it did in the HTC Case. Dkt. No. 103 at 12.

Analysis

The issue in dispute distills to whether “said external devices” should be construed as “each external device of the plurality of external devices.” It should not.

This issue was addressed by the Court in the HTC Case. The Court is not persuaded by Defendants’ argument and evidence that the HTC Case ruling was incorrect. Specifically:

> The asserted claims require an "infra-red frequency transceiver coupled to [said] microprocessor for transmitting to said external devices and receiving from said external devices." . . .
>
> Effectively, Defendant urges the Court to construe "said external devices" in the microprocessor limitation as "*each* external device of the plurality of external devices." . . .
>
> The limitation only requires that the IR transceiver be capable of sending and receiving IR signals to the plurality of external devices—not that it be capable of transmitting and sending to each device within that plurality. The specification supports this conclusion by noting "the signals can be transmitted *and/or* received . . . to any number of appliances and/or apparatus capable of receiving *and/or* transmitting compatible signals." '467 Patent at 2:17–20 (emphasis added).

HTC R&R at 6–7. The Court reiterates the reasoning and ruling set forth in *HTC R&R* and rejects Defendants' proposed construction regarding the "infra-red transceiver …" limitation.

Accordingly, the Court rejects Defendants' proposed construction and determines that this term has its plain and ordinary meaning without the need for further construction.

J. "a radio frequency transceiver … in accordance with said communication protocols"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a radio frequency transceiver … in accordance with said communication protocols" • '467 Patent Claim 2	to the extent not covered by this Court's construction in the HTC Case, plain and ordinary meaning	the radio frequency transceiver must transmit and receive signals in accordance with the same protocols as used by the infra-red frequency transceiver of claim 1

The Parties' Positions

Plaintiff submits: Subject to the Court's constructions in the HTC Case, this term should be construed to have its plain and ordinary meaning (citing *HTC CC Order* at 31–36, 42–46). Indeed, the Court rejected Defendants' proposed construction in the HTC Case, there noting that "it's nonsensical to require the RF transceiver to communicate using IR communications protocols, or

to require the IR transceiver to communicate using RF protocols" (quoting *HTC R&R* at 7–8). Dkt. No. 97 at 24–25.

In addition to the claims themselves, Plaintiff cites the following **intrinsic evidence** to support its position: '467 Patent figs.1b, 3, 5, col.1 ll.50–52, col.2 ll.17–20, col.7 ll.14–25, col.7 ll.37–54, col.20 ll.2–17, col.20 ll.41–56; '467 Patent File Wrapper October 31, 1997 Amendment at 5, 10–11, 13–14 (Plaintiff's Ex. B, Dkt. No. 97-3 at 6, 11–12, 14–15).

Defendants respond: Claim 1 refers to infra-red communications "in accordance with said communication protocols" and Claim 2, which depends from Claim 1, refers to radio frequency communications "in accordance with said communication protocols." Since "said communication protocols" necessarily means the same thing in both claims, the infra-red transceiver and the radio-frequency transceiver necessarily use the same protocols. Dkt. No. 102 at 26.

Plaintiff replies: The Court should reject Defendants' proposed construction here as it did in the HTC Case. Dkt. No. 103 at 12.

Plaintiff cites further **intrinsic evidence** to support its position: '467 Patent col.3 ll.61–62.

Analysis

The issue in dispute distills to whether the RF transceiver necessarily communicates with RF external devices using the same protocol used by the IR transceiver for communicating with IR external devices. It does not.

Claim 2, which depends from Claim 1, provides significant context to properly understand this term. Specifically, it provides:

> 1. A communications. command, control and sensing system for communicating with a plurality of external devices comprising:
> a microprocessor for generating a plurality of control signals used to operate said system. said microprocessor creating ***a plurality of reprogrammable communication protocols***, . . .

> an infra-red frequency transceiver coupled to said microprocessor for transmitting to said external devices and receiving from said external devices. infra-red frequency signals ***in accordance with said communications protocols***.
>
> 2. The communication, command, control and sensing system of claim 1 further comprising:
> radio frequency transceiver coupled to said microprocessor for transmitting to said external devices and receiving from said devices radio frequency signals at variable frequencies within a predetermined frequency range and ***in accordance with said communication protocols*** . . .

'467 Patent col.25 l.56 – col.26 l.26. For the same reasons that "said communications protocols" in Claim 1 refers to the "plurality of reprogrammable communication protocols" (set forth above), "said communications protocols" in Claim 2 refers to the "plurality of reprogrammable communication protocols." While this means that both the IR and RF communications are in accord with the "plurality of reprogrammable communication protocols" it does not mean that the RF transceiver necessarily uses the same (IR) protocol used by the IR transceiver (or vice versa). Indeed, this issue, packaged in a different form, was addressed by the Court in the HTC Case. The Court is not persuaded by Defendants' argument and evidence that the HTC Case ruling was incorrect. Specifically:

> Each asserted claim requires the IR transceiver to transmit and receive "in accordance with [earlier-recited] communications protocols." . . .
>
> The point of the invention is to enable communication with many different types of external devices, which between them may implement different IR and/or RF communication protocols. Considering the claim language in that context, it's nonsensical to require the RF transceiver to communicate using IR communications protocols, or to require the IR transceiver to communicate using RF protocols.

HTC R&R at 7–8. Further, the IR and RF transceivers are not necessarily both used for sending to and receiving from each external device. *See*, *e.g.*, '467 Patent col.2 ll.17–20 ("the signals can be transmitted and/or received . . . to any number of appliances and/or apparatus capable of receiving and/or transmitting compatible signals"), col.4 ll.61–63 ("External appliance and/or apparatus

functions are controlled in response to a radio or infra-red command and control signal generated and transmitted by the wireless communications, command, control and sensing system."), col.5 ll.14–15 ("These communication links [between the communications, command, control and sensing system and external appliances and/or apparatuses] are two way radio and/or infra-red links."), col.5 ll.15–27 (listing examples). In other words, the patent teaches: (1) communicating with an external device with IR only or RF only and, as set forth above, (2) different devices may have different protocols. Thus, communication with one device may be through an IR protocol and with a different device through a RF protocol different from the IR protocol. Ultimately, the Court reiterates the reasoning and ruling set forth in *HTC R&R* and rejects Defendants' proposed construction requiring the RF transceiver to use the same protocol as the IR transceiver.

Accordingly, the Court rejects Defendants' proposed construction and determines that this term has its plain and ordinary meaning without the need for further construction.

K. "a sound and data coupling device adapted to receive sound as data signals"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a sound and data coupling device adapted to receive sound as data signals" • '467 Patent Claim 7	to the extent not covered by this Court's construction in the HTC Case, plain and ordinary meaning	a device adapted to receive sound as data signals, excluding voice

The Parties' Positions

Plaintiff submits: The meaning of this term is plain to one of ordinary skill in the art and there is no reason to stray from that plain and ordinary meaning. Dkt. No. 97 at 25–26.

Defendants respond: The device of Claim 7 is narrower than the device of Claim 6, from which Claim 7 depends, in that the "device in claim 7 cannot receive sound commands. It is limited to receiving sound as data signals only." Claim 6 recites a device capable of receiving sound

commands: "a sound activated device coupled to said microprocessor . . . used to recognize sound signals including sound commands." The term at issue (i.e., the device of Claim 7) is narrower, it refers only to "sound as data signals." Since voice and data are distinguished from each other in the '467 Patent, the device of Claim 7 is adapted only to receive sound as data signals while the device of Claim 6 may receive both voice and data signals. Dkt. No. 102 at 27–28.

In addition to the claims themselves, Defendants cite the following **intrinsic evidence** to support their position: '467 Patent, at [57] Abstract, col.17 ll.41–44, col.17 ll.56–60, col.21 ll.37–40, col.21 ll.43–58.

Plaintiff replies: Defendants' proposed construction is improperly narrow. Dkt. No. 103 at 13.

Analysis

The issue in dispute appears to be whether the "sound and data coupling device adapted to receive sound as data signals" is adapted solely for the function of receiving sound as data signals, to the exclusion of any other capability, such as receiving voice. It is not.

A plain reading of the claims does not support Defendants' proposed construction. Specifically, Claims 6 and 7 of the '467 Patent provide:

> 6. The communications, command. control and sensing system of claim 1, further comprising ***a sound activated device coupled to said microprocessor, said sound activated device used to recognize sound signals including sound commands*** corresponding to executable logical commands, said sound activated device generating signals in response to recognized sound signals for further processing by said microprocessor.
>
> 7. The communications command. control and sensing system of claim 6, further comprising ***a sound and data coupling device adapted to receive sound as data signals***.

'467 Patent col.26 ll.51–61 (emphasis added). Defendants argue that the device of Claim 6 is capable of receiving both voice (sound commands) and sound as data and because Claim 7 is necessarily narrower than Claim 6 under the doctrine of claim differentiation, the device of Claim

7 necessarily receives only sound as data. Defendants' application of claim differentiation is unfounded. Even if the "sound activated device" of Claim 6 were necessarily the same as the "sound and data coupling device" of Claim 7—which is not supported by a plain reading of the claims or by any argument or evidence—the device of Claim 7 requires the ability to receive sound as data signals while the device of Claim 6 simply does not preclude such ability. Thus, the device of Claim 7 is narrower without precluding the ability to receive voice. Plainly, while the "sound and data coupling device" of Claim 7 is "adapted to receive sound as data signals" this does not preclude it from having other features, such as the ability to receive voice.[6]

Accordingly, the Court rejects Defendants' proposed construction and determines that this term has its plain and ordinary meaning without the need for further construction.

L. "configured to"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"configured to" • '467 Patent Claims 1, 34[7]	to the extent not covered by this Court's construction in the HTC Case, plain and ordinary meaning	a particularized arrangement of the memory device for a specific purpose

[6] The Court notes that "voice" and "data" are not necessarily mutually exclusive as the terms are used in the '467 Patent. For example, the patent teaches "microphones couple external sound signal, including voice signals, to a sound and data_coupler," and "[s]ound, voice, and/or data signals [are] inputted via a microphone." '467 Patent col.3 ll.32–34, col.3 ll.41–42. Thus, while "sound," "voice," and "data," are frequently separately enumerated in the patent, the enumerated categories are not necessarily mutually exclusive.

[7] The parties identify the dispute as focused solely on "configured to" found in Claims 1 and 34 in the following phrase: "a memory device coupled to said microprocessor configured to store . . .." Dkt. No. 108-1 at 61–64.

The Parties' Positions

Plaintiff submits: The Court should adopt the construction of this term from the HTC Case: "some particularized arrangement of the memory device for a specific purpose" (quoting *HTC R&R* at 6–7). Dkt. No. 97 at 26.

Defendants respond: The Court should adopt the construction of this term from the HTC Case, with a minor modification, changing "some" to "a" to "better conform to the surrounding claim language." Dkt. No. 102 at 28–29.

Plaintiff replies: There is no reason to stray from the construction of this term provided in the HTC Case. Dkt. No. 103 at 13.

Analysis

The issue in dispute appears to be whether "some," as found in the Court's construction of this term in the HTC Case, should be replaced with "a." At the hearing, the parties agreed that "some particularized arrangement of the memory device for a specific purpose" is the appropriate construction.

Accordingly, the Court construes "configured to" as it appears in the memory-device limitation of Claims 1 and 34, as follows:

- "configured to" means "some particularized arrangement of the memory device for a specific purpose."

M. "create," "creating," "generate," "generating," "generated," and "recreate"

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"create" • '467 Patent Claim 27	plain and ordinary meaning	bring into existence
"creating" • '467 Patent Claims 1, 34	plain and ordinary meaning	bringing into existence

Disputed Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"generate" • '467 Patent Claim 28[8]	plain and ordinary meaning	bring into existence
"generating" • '467 Patent Claims 1, 3, 6, 34	plain and ordinary meaning	bringing into existence
"generated" • '467 Patent Claims 2, 3	plain and ordinary meaning	brought into existence
"recreate" • '467 Patent Claims 1, 34	plain and ordinary meaning	bring something back into existence

Because the parties' arguments and proposed constructions with respect to these terms are related, the Court addresses the terms together.

The Parties' Positions

Plaintiff submits: For the same reasons that "generating" and "creating" in the "microprocessor for generating a plurality of control signals . . . " term do not require bringing anything into existence, these terms do not require bringing anything into existence. Dkt. No. 97 at 16–17 & n.5.

Defendants respond: The claim terms "create" and "generate" and variants mean to bring something into existence, thus these terms are directed to bringing something into existence. Dkt. No. 102 at 17–19.

In addition to the claims themselves, Defendants cite the following intrinsic and extrinsic evidence to support their position: **Intrinsic evidence**: '467 Patent col.7 ll.14–19; Patent Owner's

[8] The term "generates" appears in Claim 4, which Plaintiff identified as an asserted claim, but "generates" was not in bold type in the parties' Revised Joint Claim Construction Chart Pursuant to Patent Rule 4-5(d). Dkt. No. 108-1 at 41.

Preliminary Response, *HTC Corp. et al. v. Joe Andrew Salazar*, IPR2018-00273 (P.T.A.B. Apr. 11, 2018), Paper No. 10 at 3 (Defendants' Ex. B, Dkt. No. 102-3 at 11). **Extrinsic evidence**: *Webster's New World College Dictionary* (3d ed. 1995), "create," "generate," "recreate" (Defendants' Ex. C, Dkt. No. 102-4 at 4–6).

Plaintiff replies: For the reasons stated in the section on the "microprocessor for generating a plurality of control signals . . . " term, the "create," "generate," and "recreate" terms should not be construed as bringing something into existence. Dkt. No. 103 at 4–6.

Analysis

The issues in dispute are the same as presented with respect to "generating" and "creating" in the "a microprocessor for generating a plurality of control signals . . . " term. For the reasons stated above, the Court rejects Defendants' proposed constructions and determines that these terms have their plain and ordinary meanings without the need for further construction.

V. CONCLUSION

The Court adopts the constructions set forth above, as summarized in the following table. The parties are **ORDERED** that they may not refer, directly or indirectly, to each other's claim-construction positions in the presence of the jury. Likewise, the parties are **ORDERED** to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim-construction proceedings is limited to informing the jury of the definitions adopted by the Court.

The parties are hereby **ORDERED** to file a Joint Notice within fourteen (14) days of the issuance of this Memorandum Opinion and Order indicating whether the case should be referred for mediation. If the Parties disagree about whether mediation is appropriate, the Parties should set forth a brief statement of their competing positions in the Joint Notice.

Section	Term	Construction
A	"a microprocessor for generating a plurality of control signals used to operate said system, said microprocessor creating a plurality of reprogrammable communication protocols" • '467 Patent Claim 1, 34	a microprocessor configured to generate two or more control signals used to operate said system and configured to create two or more reprogrammable communication protocols
	"a plurality of control signals" • '467 Patent Claims 1, 34	two or more signals
B	"a selector controlled by said microprocessor for enabling said radio frequency transceiver and said infra-red frequency transceiver to transmit a desired command code set generated by said microprocessor via either radio frequency signals and infra-red signals as desired, and to receive a signal from any one of said external devices via either radio frequency signals and infra-red signals" • '467 Patent Claim 2	a selector controlled by said microprocessor for enabling said radio frequency transceiver and said infra-red frequency transceiver to transmit a desired command code set generated by said microprocessor via either radio frequency signals and infra-red signals as selected by a user, and to receive a signal from any one of said external devices via either radio frequency signals and infra-red signals
	"selector" • '467 Patent Claim 2	plain and ordinary meaning
C	"a communication protocol" • '467 Patent Claims 1, 34	plain and ordinary meaning
D	"a plurality of reprogrammable communication protocols" • '467 Patent Claims 1, 34	two or more reprogrammable communication protocols
E	"such that the memory space required to store said parameters is smaller than the memory space required to store said command code sets" • '467 Patent Claim 1	such that the memory space required to store said plurality of parameter sets is smaller than the memory space required to store said command code sets
F	"a desired command code set" • '467 Patent Claim 1	plain and ordinary meaning

Section	Term	Construction
G	"a microprocessor for generating …, said microprocessor creating …, a plurality of parameter sets retrieved by said microprocessor …, said microprocessor generating …" • '467 Patent Claims 1, 34	one or more microprocessors, at least one of which is configured to perform the generating, creating, retrieving, and generating functions
H	"said microprocessor generating a communication protocol in response to said user selections" • '467 Patent Claims 1, 34	plain and ordinary meaning
	"said communications protocols" • '467 Patent Claims 1, 34	said plurality of reprogrammable communication protocols
I	"an infra-red frequency transceiver coupled to said microprocessor for transmitting to said external devices and receiving from said external devices, infra-red frequency signals in accordance with said communications protocols" • '467 Patent Claims 1, 34	plain and ordinary meaning
J	"a radio frequency transceiver . . . in accordance with said communication protocols" • '467 Patent Claim 2	plain and ordinary meaning
K	"a sound and data coupling device adapted to receive sound as data signals" • '467 Patent Claim 7	plain and ordinary meaning
L	"configured to" • '467 Patent Claims 1, 34	some particularized arrangement of the memory device for a specific purpose
M	"create" • '467 Patent Claim 27	plain and ordinary meaning
	"creating" • '467 Patent Claims 1, 34	plain and ordinary meaning

Section	Term	Construction
	"generate" • '467 Patent Claim 28	plain and ordinary meaning
	"generating" • '467 Patent Claims 1, 34	plain and ordinary meaning
	"generated" • '467 Patent Claim 2	plain and ordinary meaning
	"recreate" • '467 Patent Claims 1, 34	plain and ordinary meaning

So ORDERED and SIGNED this 18th day of September, 2020.

RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE