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

SITEPRO, INC.,	§	
Plaintiff,	§	
v.	§	
	§	CIVIL NO. 6:23-CV-115-ADA-DTG
WATERBRIDGE RESOURCES LLC, WATERBRIDGE OPERATING LLC, WATERBRIDGE HOLDINGS LLC, WATERBRIDGE MANAGEMENT INC., and THE INTEGRATION GROUP OF THE AMERICAS,	§	
Defendants.	§	

CLAIM CONSTRUCTION
MEMORANDUM AND ORDER

Before the Court are the parties' claim construction briefs: Defendants Waterbridge Resources LLC, Waterbridge Operating LLC, Waterbridge Holdings LLC, Waterbridge Management Inc., and The Integration Group of Americas' Opening and Amended Reply briefs (ECF Nos. 56 and 70, respectively)[1] and Plaintiff SitePro, Inc.'s Responsive Claim Construction Brief and Surreply Claim Construction Brief (ECF Nos. 65 and 73, respectively). Further before the Court are the Defendants' November 29, 2023, Notice of Amended Claim Terms for Construction and the parties' January 12, 2023 Joint Claim Construction Statement (ECF Nos. 64 and 76, respectively). United States District Judge Alan D Albright referred this case to the undersigned on February 13, 2023. The Court provided preliminary constructions for the disputed terms one day before the hearing. The Court held the *Markman* hearing on January 26, 2023. ECF

[1] References to ECF numbers are to Civil Action No. 6:23-CV-00115 unless otherwise indicated.

No. 83. On January 29, 2023, the Court informed the Parties of the final constructions for the disputed terms. ECF No. 84. This Order does not alter any of those constructions.

Table of Contents

I. BACKGROUND **4**
II. DESCRIPTION OF THE ASSERTED PATENTS **4**
III. LEGAL PRINCIPLES **5**
General Principles 5
Indefiniteness and Functional Claiming Under 35 U.S.C. § 112(6) (pre-AIA) / § 112(f) (AIA) 7
Judicial Correction 11
IV. LEVEL OF ORDINARY SKILL **11**
V. THE PARTIES' STIPULATED TERMS **12**
VI. LEGAL ANALYSIS **13**
A. Term #1: "communication module operable to communicate" 13
B. Term #2: "translating" 21
C. Term #3: "at least some of the translated command" 28
D. Term #4: "the operation of the fluid-handling device" 33
E. Term #5: "the operation of an oil well, a petro water disposal or re-injection facility or a petroleum pumping station" 38
F. Term #6: "processes" 43
G. Term #7: "each [ ] instructions" 46
H. Term #8: "ramp" 56
I. Term #9: "facility-interface module or modules" 61
J. Term #10: "web-interface module or modules" 71
K. Term #11: "storing, with one or more processors, records" 78
L. Term #12: "steps for ensuring at least some data is not lost" 81
M. Term #13: "steps for translating commands" / "steps for translating a command" 86
N. Term #14: "steps for loosening a stuck valve" 91
O. Term #15: "steps for mitigating shocks to up-stream or down-stream fluid handling devices" 94
P. Term #16: "the sequence of different target states that change over time are determined with steps for mitigating shocks to up-stream or down-stream fluid-handling devices relative to the first pump" 98
Q. Term #17: "steps for identifying protocols and control busses" 102
R. Term #18: "one or more properties associated with the first fluid" 106

S. Term #19: "a first client computing device" 110
VII. CONCLUSION 117
APPENDIX A 118

I. BACKGROUND

In the above-captioned case, Plaintiff asserts the patents and claims set forth in the following chart (ECF No. 56 at 2-3):

Patent	Asserted Claims
(1) U.S. Patent No. 8,649,909 (the '909 Patent)	Claims 1-17 and 19-21
(2) U.S. Patent No. 9,342,078 (the '078 Patent)	Claims 1-9, 11-13, and 15-19
(3) U.S. Patent No. 9,898,014 (the '014 Patent)	Claims 1-23
(4) U.S. Patent No. 10,488,871 (the '871 Patent)	Claims 18-34
(5) U.S. Patent No. 11,175,680 (the '680 Patent)	Claims 1-20
(6) U.S. Patent No. 11,294,403 (the '403 Patent)	Claims 1-30
(7) U.S. Patent No. 11,726,504 (the '504 Patent)	Claims 1-20

II. DESCRIPTION OF THE ASSERTED PATENTS

Defendant submits that the asserted patents "generally describe systems and methods for remotely controlling fluid-handling devices at oil wells, water disposal or reinjection facilities, or petroleum pumping stations." ECF 56 at 1. Defendants further submit:

> Many systems exist for such remote control, which are known in the industry as supervisory control and data acquisition ("SCADA") systems. The Asserted Patents claim to address the purported challenges faced when monitoring or controlling remote fluid-handling devices, namely that it can be time-consuming and expensive for a technician to manually adjust or otherwise control the devices, as the technician will incur costs and delays traveling to the sites where the devices are located in order to make adjustments or gather data in person. Another purported advantage claimed by the Asserted Patents, which the patentee distinguished from the prior art, is the capability of retaining functionality when a network connection is lost. According to the Asserted Patents, connections between a controller and the fluid-handling site may be made through a private network through which communications are sent without passing through the public Internet. The Asserted Patents also provide that input/output modules of the control system also perform encoding and decoding at both the network and transport layers, for example packaging data in appropriately structured frames for the respective control bus. Finally, the Asserted Patents note that controllers can retrieve sensor data, alarms, and other site data and buffer such data in the report buffer so that data is not lost if network access is lost.

Id. at 1-2.

Plaintiff states that the asserted patents "address the problems that have hindered the SCADA community for decades." ECF 65 at 3. Specifically, Plaintiff states that the patented inventions solve a problem in SCADA systems of system failure due to a loss of network connection. *Id.* Plaintiff alleges that "the claimed invention allows for the site-master controller to execute commands 'to completion, even if Internet access is lost before the command is fully executed.'" *Id.* at 3-4 (quoting '909 Patent at 3:3-4). Plaintiff also states that the asserted patents solve the issue of need for installation of "special-purpose software" in SCADA systems by using the command-center server. *Id.* at 4.

The '909 Patent, titled "Remote Control of Fluid-Handling Devices," issued on February 11, 2014, and bears an earliest priority date of December 7, 2012 (the filing date of U.S. Application No. 13/708,557). The '909 Patent relates to systems and processes for remotely controlling and receiving feedback from fluid-handling devices through a network. *See* '909 Patent at Abstract. All asserted patents are continuations of the '557 Application, and share the same abstract, figures, specification, and earliest priority date. All asserted patents also share the same title. The '078 Patent issued on May 17, 2016. The '078 Patent issued on May 17, 2016.The '014 Patent issued on February 20, 2018. The '871 Patent issued on November 26, 2019. The '680 Patent issued on November 16, 2021. The '403 Patent issued on April 5, 2022. The '504 Patent issued on August 15, 2023.

III. LEGAL PRINCIPLES

General Principles

The general rule is that claim terms are generally given their plain-and-ordinary meaning. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc); *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014), *vacated on other grounds*, 575 U.S. 959 (2015)

("There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.") (cleaned up). The plain-and-ordinary meaning of a term is the "meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips*, 415 F.3d at 1313.

The "only two exceptions to [the] general rule" that claim terms are construed according to their plain-and-ordinary meaning are when the patentee (1) acts as his/her own lexicographer or (2) disavows the full scope of the claim term either in the specification or during prosecution. *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). The Federal Circuit has counseled that "[t]he standards for finding lexicography and disavowal are exacting." *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014). To act as his/her own lexicographer, the patentee must "clearly set forth a definition of the disputed claim term" and "'clearly express an intent' to [define] the term." *Thorner*, 669 F.3d at 1365.

"Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent." *Phillips*, 415 F.3d at 1317. "[D]istinguishing the claimed invention over the prior art, an applicant is indicating what a claim does not cover." *Spectrum Int'l, Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1379 (Fed. Cir. 1998). The doctrine of prosecution disclaimer precludes a patentee from recapturing a specific meaning that was previously disclaimed during prosecution. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). "[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable." *Id.* at 1325–26. Accordingly, when "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).

A construction of "plain and ordinary meaning" may be inadequate when a term has more than one "ordinary" meaning or when reliance on a term's "ordinary" meaning does not resolve the parties' dispute. *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008). In that case, the Court must describe what the plain-and-ordinary meaning is. *Id.*

"Although 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." *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988). "[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).

Although extrinsic evidence can 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. v. United States Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004)). Technical dictionaries may be helpful, but they may also provide definitions that are too broad or not indicative of how the term is used in the patent. *Id.* at 1318. Expert testimony may also be helpful, but an expert's conclusory or unsupported assertions as to the meaning of a term are not. *Id.*

Indefiniteness and Functional Claiming Under 35 U.S.C. § 112(6) (pre-AIA) / § 112(f) (AIA)[2]

"[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). Patent claims must particularly point

[2] Because the '557 Application resulting in each of the asserted patents was filed after September 16, 2012, the effective date of the AIA, the Court refers to the AIA version of § 112.

out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112(b). 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(b) 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 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).

A patent claim may be expressed using functional language. *See* 35 U.S.C. § 112(f); *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015) (*en banc* in relevant portion). Section 112(f)[3] provides that a patent applicant may express "[a]n element in a claim" as "a means or step for performing a specified function without the recital of structure, material or acts in support thereof." But, recites the statute, the claim will be construed to cover only "the corresponding structure, material, or acts described in the specification and equivalents thereof." The Federal Circuit has interpreted "the term 'steps' to "refer to the generic description of elements of a process, and the term 'acts' to refer to the implementation of such steps." *O.I. Corp. v. Tekmar Co.*, 115 F.3d 1576, 1583 (Fed. Cir. 1997). With respect to § 112(f), "structure and material go with means, acts go with steps." *Id.*

A § 112(f) analysis consists of two steps. *See Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1365 (Fed. Cir. 2022). The first step is to determine whether a claim limitation is drafted in means-plus-function format such that § 112(f) applies to the claim limitation. *See id.* In making that determination, the Federal Circuit has "long recognized the importance of the presence or absence

[3] This provision is also known as 35 U.S.C. § 112, ¶ 6.

of the word 'means.'" *Williamson*, 792 F.3d at 1348. In the absence of the word means, it is presumed that a claim limitation is not subject to § 112(f). *Id.* The presumption stands or falls according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of the entire specification, to denote sufficiently definite structure or acts for performing the function. *See Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015) (stating that § 112, ¶ 6 does not apply when "the claim language, read in light of the specification, recites sufficiently definite structure" (quotation marks omitted) (citing *Williamson*, 792 F.3d at 1349; *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014))); *Williamson*, 792 F.3d at 1349 (stating that § 112, ¶ 6 does not apply when "the words of the claim are understood by persons of ordinary skill in the art to have sufficiently definite meaning as the name for structure"); *Masco Corp. v. U.S.*, 303 F.3d 1316, 1326 (Fed. Cir. 2002) (stating that "even where the drafter employs the 'step for' language, section 112, ¶ 6 is implicated only when steps plus function without acts are present.") (cleaned up); *Personalized Media Communs., L.L.C. v. ITC*, 161 F.3d 696, 704 (Fed. Cir. 1998) (stating that § 112, ¶ 6 does not apply when the claim includes "sufficient structure, material, or acts within the claim itself to perform entirely the recited function . . . even if the claim uses the term 'means'") (cleaned up).

Intrinsic evidence, such as the claims themselves and the prosecution history, can be informative in determining whether the disputed claim language recites sufficiently definite structure or was intended to invoke § 112(f). *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1299 (Fed. Cir. 2014); *see also Phillips*, 415 F.3d at 1317 (The prosecution history "often inform[s] the meaning of the claim language by demonstrating how the inventor understood the invention."). In addition, because this inquiry turns on the understanding of a person of ordinary skill in the art, the Court may look to extrinsic evidence when determining whether a disputed limitation would

have connoted structure to a person of ordinary skill. *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1320 (Fed. Cir. 2004) (noting expert witness testimony and technical dictionaries "help determine whether a claim term" would have had an "understood meaning in the art") (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002)). In cases where it is clear that a claim term itself connotes some structure to a person of ordinary skill in the art, "the presumption that § 112 [(f)] does not apply is determinative" in the absence of "more compelling evidence of the understanding of one of ordinary skill in the art." *Apex Inc. v. Raritan Comput., Inc.*, 325 F.3d 1364, 1373 (Fed. Cir. 2003).

If the limitation fails to recite sufficiently definite structure or acts, then § 112(f) applies and the Court moves to step two of the analysis. At step two, the Court determines whether the specification discloses structure or acts that "corresponds to the claimed function." *Williamson*, 792 F.3d at 1351. A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id.* If there is no identifiable "corresponding structure, material, or acts described in the specification," the claim term is indefinite. *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1312 (Fed. Cir. 2012) ("[A] means-plus-function clause is indefinite if a person of ordinary skill in the art would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim.") (citations omitted).

For § 112(f) limitations implemented by a programmed general purpose computer or microprocessor, the corresponding structure described in the patent specification must include an

algorithm for performing the function. *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). The corresponding structure is not a general purpose computer but rather the special purpose computer programmed to perform the disclosed algorithm. *Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008).

Judicial Correction

"A district court may correct 'obvious minor typographical and clerical errors in patents.'" *Pavo Sols. LLC v. Kingston Tech. Co.*, 35 F.4th 1367, 1373 (Fed. Cir. 2022) (quoting *Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1357 (Fed. Cir. 2003)). "Correction is appropriate 'only if (1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims.'" *Id.* (quoting *Novo Indus.*, 350 F.3d at 1354). "The error must be 'evident from the face of the patent,' . . . and the determination 'must be made from the point of view of one skilled in the art[.]'" *Id.* (quoting *Grp. One, Ltd. v. Hallmark Cards, Inc.*, 407 F.3d 1297, 1303 (Fed. Cir. 2005), and *Ultimax Cement Mfg. Corp. v. CTS Cement Mfg. Corp.*, 587 F.3d 1339, 1353 (Fed. Cir. 2009)). "In deciding whether a particular correction is appropriate, the court 'must consider how a potential correction would impact the scope of a claim and if the inventor is entitled to the resulting claim scope based on the written description of the patent.'" *Id.* (quoting *CBT Flint Partners, LLC v. Return Path, Inc.*, 654 F.3d 1353, 1359 (Fed. Cir. 2011)).

IV. LEVEL OF ORDINARY SKILL

Plaintiff argues that a POSITA at the time of the invention of the asserted patents would have a bachelor's degree in electrical engineering, mechanical engineering, petroleum engineering, or computer science and at least two years of industry experience in control systems or an equivalent field. Plaintiff posits that a combination of more formal education, such as a master's

degree in combination with less technical experience, or less formal education with more technical or professional experience, would also qualify. ECF 65 at 2. Defendants stated in the *Markman* hearing that they do not dispute the Plaintiff's proposal. Therefore, the Court adopts the Plaintiff's proposed level for purposes of this analysis.

V. THE PARTIES' STIPULATED TERMS

The parties have agreed to the constructions of the following terms/phrases in their January 12, 2024, Joint Claim Construction Statement. The parties have further agreed that the preambles of the asserted claims are not limiting.

Term	Patent(s) Claims(s)	Agreed Construction
"sending an address of the identified fluid handling device on the identified bus in association with at least some of the translated instructions"	'078 Patent, claims 3, 22	Plain and ordinary meaning
"received in association with"	'680 Patent, claims 1, 20	Plain and ordinary meaning
"executing s process recipe"	'403 Patent, claim 18	Executing a process recipe
"other threads"	'014 Patent, claims 13, 14; '871 Patent, claims 9, 10, 26, 27	Plain and ordinary meaning
"eliminated threads"	'014 Patent, claims 13, 14; '871 Patent, claims 9, 10, 26, 27	Plain and ordinary meaning
"configured interface"	'014 Patent, claim 10; '871 Patent, claim 24	"configured to interface"
"data about other fluid handling sites the user is not authorized to interact"	'504 Patent, claims 1, 20	"data about other fluid handling sites the user is not authorized to interact with"

ECF No. 76 at 2.

VI. LEGAL ANALYSIS

A. Term #1: "communication module operable to communicate"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #1: "communication module operable to communicate U.S. Patent No. 8,649,909, Cl. 1 Proposed by Defendants	Plain and ordinary meaning, or if determined to be a means-plus-function term: **Function:** Communicating with a fluid-handling device or devices **Structure:** Input/output modules and equivalents (See, e.g., '909 Patent at 1:52-53, 10:26-38)	Indefinite

ECF No. 76 at 3.

The Parties' Positions

Defendants argue that the term "module" is a "nonce word" that replaces "means" for purpose of invoking 35 U.S.C. 112(f). ECF 56 at 28. Citing *Williamson*, 792 F.3d at 1350, the Defendants argue that the term "module" is a "black box recitation of structure" and means "little more than a general purpose computer." ECF 56 at 28. Defendants further allege that the specification "does not include a corresponding structure for this functional claim" and therefore the claim is indefinite. *Id.* (citing *Aristocrat Techs.,* 521 F.3d at 1331).

Plaintiff responds that the claim language provides sufficient structure to one of ordinary skill in the art such that § 112(f) is not invoked. ECF 65 at 5. Plaintiff also argues that the presumption against applying § 112(f) is not overcome because the relevant function is a "basic" computer-implemented function such that the claimed structure is sufficient for performing the function and plain and ordinary meaning is appropriate. *Id.* at 6 (citing *CXT Sys., Inc. v. Acad., Ltd.*, No. 18-cv-00171, 2019 WL 4253841, at *1 (E.D. Tex. Sept. 6, 2019); *EON Corp. IP Holdings*

LLC v. AT&T Mobility LLC, 785 F.3d 616 (Fed. Cir. 2015)). Plaintiff further argues that a POSITA would have understood the term in light of the claim and specification at the time of the invention "to be one of several different communication modules appropriate to communicate with the various fluid handling devices located at the site, including modbus modems, printed circuit boards with one or more digital to analog converters, or Ethernet cards. *Id.* at 6-7 (citing '909 Patent at 10:26-38; Durham Decl. at ¶ 37). Plaintiff provides additional argument, that to the extent the term invokes § 112(f), the specification discloses sufficiently linked structure to render the term definite. *Id.* at 7. Specifically, Plaintiff identifies that in claim 1, the claimed "communication module operable to communicate" is claimed as being comprised within "each site master controller," and the specification identifies within the site master controller structure in the form of an "input/output module operable to communicate with a fluid-handling device." *Id.* at 7-8 (citing '909 Patent at 1:52-53, 10:26-38; Durham Decl. at ¶ 39-40).

Defendants reply that "communication module" does not appear anywhere outside of claim 1, that any construction of this term "must include communication with 'a plurality' of fluid-handling devices" and that "the shared specification does not disclose any structure clearly linked to the function of communicating with a plurality of fluid handling devices." ECF 68 at 3. Defendants argue that the holding in *CXT Sys.* was a "context-specific inquiry" not related to § 112(f)/§ 112 ¶ 6, and is therefore inapplicable. Defendants further argue that the specification does not equate a "communication module" with an "input/output module," and that no algorithm is disclosed to perform any "general purpose computer function" such that disclosure is insufficient to support Plaintiff's argument. *Id.* at 4-5.

Plaintiff replies that "module" is not a nonce word in this instance, as the functioning of "communicating" is basic and provides the required structure to one of ordinary skill. ECF 73 at

2-3. Plaintiff cites to Dr. Durham's Declaration supporting that the "communication module operable to communicate" would mean any appropriate off-the-shelf communication module such as those cited in the specification. *Id.* at 3 (citing Durham Decl. at ¶ 37). Even if the term was determined to invoke § 112(f), Plaintiff again argues that the specification discusses sufficiently linked structure such as input/output modules and equivalents that perform the identified function and are linked to the function sufficiently so the explicit term "communication module" is not required in the specification for definiteness. *Id.* at 3-4. Plaintiff argues that Defendants' distinguishing arguments regarding *CXT Sys.* are not meaningful, as the holding focused on whether the term "processing module" was limited to a specific processing function or general processing. *Id.* at 4. Plaintiffs argue that the specific communicating performed by the "communication modules operable to communicate" is irrelevant and basic such the term should be given its plain meaning. *Id.*

The Court's Analysis

The parties dispute whether the term is subject to § 112(f) and whether it is indefinite. Claim 1 of the '909 patent recites (emphasis added):

> 1. A system for remotely controlling a fluid-handling device of an oil well, a petro water disposal or re-injection facility, or a petroleum pumping station, the system comprising:
>
> a command-center server having a data store storing multiple user accounts, each user account corresponding to a set of one or more oil wells, petro water disposal or re-injection facilities, or petroleum pumping stations, or a combination thereof, each set being operated by a different entity corresponding to the respective user account; and
>
> a plurality of geographically distributed site master controllers, each site master controller corresponding to a respective one of the oil wells, petro water disposal or re-injection facilities, or petroleum pumping stations, each site master controller comprising:
>
> *a communication module operable to communicate with a plurality of fluid-handling devices*;

a network interface;
memory; and
one or more processors communicatively coupled to the communication module, the network interface, and the memory, wherein the memory stores instructions that when executed by the processors cause the processors to effectuate steps comprising:
receiving, via the network interface, from the command-center server, a plurality of commands encoded in a first protocol to control the fluid-handling devices from a user corresponding to one of the user accounts, different commands among the plurality of commands being directed to different fluid handling devices among the plurality of fluid-handling devices;
for at least some of the plurality of commands, determining a plurality of different target states of a given one of the fluid-handling devices over time, wherein the respective site-master controller is operative to maintain control of the fluid handling devices in the absence of a network connection to the command-center server;
translating the plurality of commands into translated commands encoded in a plurality of protocols different from the first protocol, each translated command being translated into a protocol among the plurality of protocols suitable for a fluid-handling device to which the respective command is directed, the at least some of the translated command being operative to cause a local controller of the given fluid-handling device to drive the given fluid-handling device to the plurality of different target states, the local controller being responsive to the translated commands and feedback from the given fluid-handling device indicative of whether the given fluid-handling device is in a target state; and
sending the translated commands to respective local controllers of the respective fluid-handling devices to which the respective commands are directed.

The relevant claim limitation in question is "a communication module operable to communicate with a plurality of fluid-handling devices." *See Williamson*, 792 F.3d at 1350 (analyzing full limitation and not just introductory phrase). This term does not recite "means" or

"step" for performing a function, and therefore is rebuttably presumed to not invoke § 112(f). Further, the claim element is not written in means-plus-function formatting. Therefore, the relevant question is whether one of ordinary skill in the art would understand the claim, in the context of the entire specification, to denote sufficiently definite structure or meaning.

Starting with the intrinsic evidence, the claim recites that the relevant communication module is operable to communicate "with a plurality of fluid-handling devices." '909 Patent, claim 1. The recited communication module is one of several elements comprising each of a plurality of geographically distributed site master controllers. *Id.* Each site master controller "correspond[s] to a respective one of the oil wells, petro water disposal or re-injection facilities, or petroleum pumping stations." *Id.* The claim further recites that each site master controller further comprise "a network interface;" "memory"; and "one or more processors communicatively coupled to the communication module, the network interface, and the memory, wherein the memory stores instructions that when executed by the processors cause the processors to effectuate steps" comprising multiple communications and commands between the command-center server, the site master controller, and fluid-handling devices. *Id.* The claim recites, *inter alia*, that commands are "directed to different fluid handling devices;" that the recited site-master controller "is operative to maintain control of the fluid handling devices;" that translated commands from a site-master controller are "operative to cause a local controller of the given fluid-handling device to drive the given fluid-handling device to the plurality of different target states;" and that the translated commands are sent "to respective local controllers of the respective fluid-handling devices to which the respective commands are directed." *Id.*

The shared specification identifies examples of fluid-handling devices as including "valves, pumps, and various other forms of process equipment" that are used "to extract petroleum

products from an oil well" or are used in "petro-water disposal facilities, re-injection facilities, and petroleum pumping stations." *Id.* at 1:11-22. It further describes in one embodiment that fluid-handling devices "are fluidly coupled to a fluid source 50 or a fluid receptacle 52, such that fluids (e.g., liquids or gases) can flow to, from, or through the respective fluid-handling device 38." *Id.* at 5:23-26. The specification states that "a single implementation of the site master-controller 16 is relatively versatile regardless of the type of fluid-handling device being controlled." *Id.* at 3:6-9. Figure 1 of the shared specification "illustrates an example of a command-center server and site master-controller in accordance with some embodiments," *Id.* at 2:31-33, and shows the following:

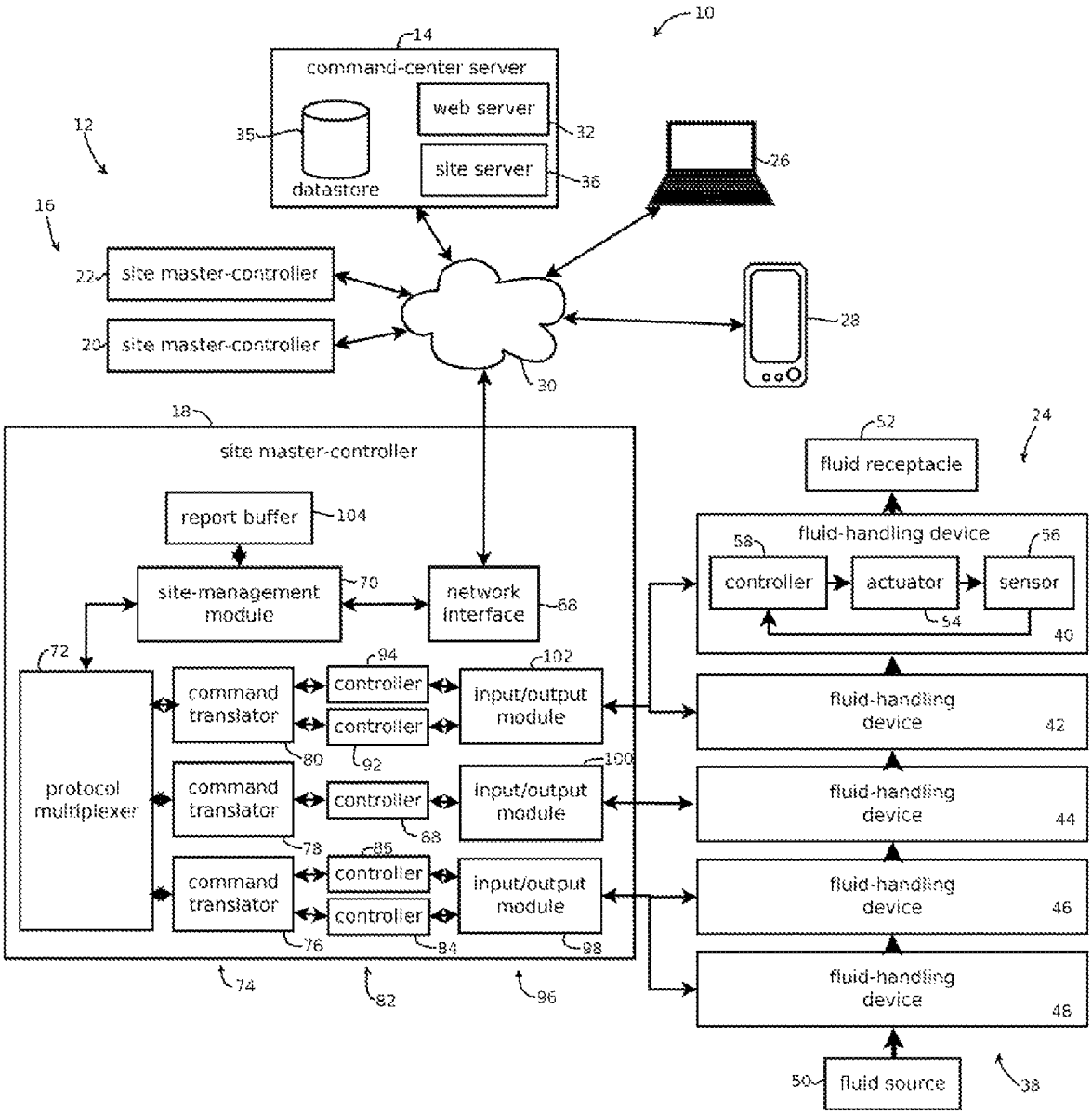


FIG. 1

As shown above and as further described in the specification, Figure 1 shows a "site master-controller" (18) that "communicates with the fluid-handling devices 38 via a plurality of control buses 60 (individually labeled as 62, 64, and 66)," and that each control bus "may be operative to convey commands to one or more of the fluid-handling devices 38 using a different protocol."

’909 Patent at 6:18-23. In an example, a command to increase a pump speed is “conveyed via the control bus 66 [and] causes a corresponding fluid-handling device 40 or 42 to change state.” *Id.* at 9:17-23. Figure 1 further identifies that the site master-controller communicates with individual or multiple fluid-handling devices (38, 42, 44, 46, and 48) through “input/output module[s]” 98, 100, and 102. *Id.* at Fig. 1. The specification states that the input/output modules may include “link-layer devices that accommodate the particular features of the physical medium with which control buses 62, 64, and 66 are implemented.” *Id.* at 10:26-29. It further provides an example in which “the input/output module 102 includes a modbus modem, the input/output module 100 includes a data acquisition board (for example a printed circuit board having one or more digital-to-analog converters or analog-to-digital converter), and the input/output module 98 includes an Ethernet network interface card.” *Id.* at 10:33-38. In another example, the specification states:

> [T]he control bus 66 conveys commands and data using a serial communication protocol, such as the Modbus remote terminal unit (RTU) protocol, in which commands and other data are encoded in binary signals packaged in frames having redundant bits for detecting errors. The fluid-handling devices 40 and 42 on the bus 66, in this example, each have a unique address on the bus 66 by which commands from the site master-controller 68 are addressed to specific fluid-handling devices 40 or 42, and these addresses may be stored in memory of the site master-controller 18.

Id. at 6:34-43.

The prosecution history is not particularly relevant. Neither party relies on the prosecution history in support of their arguments. Further, because the intrinsic evidence is determinative, reliance on extrinsic evidence is unnecessary.

The Court rejects Defendants’ indefiniteness arguments. Defendants start with a faulty assumption that the term is subject to § 112(f), and based all arguments on that assumption, rather than acknowledging their burden to prove its applicability. Defendants have not overcome their

burden to show that the claim term "a communication module operable to communicate with a plurality of fluid-handling devices" is subject to § 112(f). As shown above, the claim and specification contain ample references and teachings for one of ordinary skill to understand the structure for the term "a communication module operable to communicate with a plurality of fluid-handling device" as used in claim 1 of the '909 Patent. The claim and specification identify specific structures within the site-master controller that communicate with a plurality of fluid-handling devices, providing multiple examples of the types of devices and how those devices are structured and may be programmed to communicate with various fluid-handling devices.[4] The fact that there are multiple physical embodiments to communicate with various types of fluid-handling devices does not require an application of § 112(f) or a finding of indefiniteness.

The Court therefore construes **"communication module operable to communicate"** as not subject to § 112(f), concludes that it is not indefinite, and as no further construction is necessary, determines it to have its **plain meaning**.

B. Term #2: "translating"

Term	**Plaintiff's Proposed Construction**	**Defendants' Proposed Construction**
Term #2: "translating" U.S. Patent No. 8,649,909, Cls. 1, 20-21; U.S. Patent No. 9,898,014, Cls. 19, 20; U.S. Patent No. 9,342,078, Cl. 1; U.S. Patent No. 10,488,871, Cl. 32; U.S. Patent No. 11,175,680, Cls. 4, 8; and U.S. Patent No. 11,726,504, Cls. 8, 15 Proposed by Defendants	Plain and ordinary meaning	Indefinite

ECF No. 76 at 3.

[4] Even if the Court concluded that this term was subject to § 112(f), Defendants' indefiniteness arguments would fail for many of the same reasons cited herein.

The Parties' Positions

Defendants argue that the term "translating" is not explicitly defined in the shared specification, and that there "is little in the patents to explain the critical details of *how* translation is accomplished." ECF 56 at 32. Defendants argue the lack of detail or "guideposts" to determine "whether a given calculation or table" constitutes "translating" results in indefiniteness. *Id.* (citing *Atmel Corp. v. Info. Storage Devices*, 198 F.3d 1374 (Fed. Cir. 1999)).

Plaintiff responds that the term "generally refers to the conversion of computer code from one format to another," that the claim and specification provide sufficient support for this understanding and that a POSITA would not require an explicit definition to understand the scope of the term. ECF 65 at 9-10 (citing '909 Patent at 5:13-16; 9:5-7; 9:17-21; 16:43-49; Claim 1; Durham Decl. at ¶¶42-46). Plaintiff also argues that Defendants' reliance on *Atmel* regarding the scope of "translating" is misplaced, arguing that case centered on whether sufficient structure existed in the specification to define a term governed by § 112(f), and whether incorporation by reference to non-patent publications was proper. *Id*. at 10.

Defendants reply that, as used in claim 1 of the '909 Patent, "translating" in context requires that "the translated command must be encoded in a *plurality* of protocols different from the first protocol and be suitable for controlling the fluid handling device, and to *drive* the fluid handling device to the *plurality of different target states*." ECF 68 at 5 (emphasis in original). Defendants further reply that the asserted patents do not disclose "what method or device is employed to translate a command from a 'first protocol' into a translated command encoded in a 'plurality' of protocols to 'drive' a device to a 'plurality of different target states." *Id.* at 6 (citing *Teva Pharms. USA, Inc. v. Sandoz*, 789 F.3d 1355, 1342 (Fed. Cir. 2015).

Plaintiff replies that Defendants attempt to "impute additional limitations into the claims" by citing instances in the patent that discuss functions of a "translated command," which Plaintiff argues is a different term. ECF 73 at 4. Plaintiff argues that, contrary to Defendants' position, "translating" and "driving" are two separate functions, but Defendants conflate them. *Id.* at 4-5. Plaintiff replies that, "in the context of the 'to drive' function, the term 'translated' is merely modifying the term 'command' to clarify which command must include this additional functionality." *Id.* at 5. Finally, Plaintiffs argue that *Teva* is not relevant because "translating" is not governed by § 112(f) and a person of ordinary skill would understand the term according to its plain and ordinary meaning. *Id.*

The Court's Analysis

The term "translating" appears in multiple instances throughout the asserted patent claims. Some examples of the various instances are below in excerpted format (emphasis added).

'909 Patent claim 1:

> *translating* the plurality of commands into translated commands encoded in a plurality of protocols different from the first protocol, each translated command being translated into a protocol among the plurality of protocols suitable for a fluid-handling device to which the respective command is directed, the at least some of the translated command being operative to cause a local controller of the given fluid-handling device to drive the given fluid-handling device to the plurality of different target states, the local controller being responsive to the translated commands and feedback from the given fluid-handling device indicative of whether the given fluid-handling device is in a target state; and

'014 Patent claim 19:

> 19. The system of claim 12, comprising:
> means for *translating* a command for an actuator from an input format to a format configured to effectuate changes in the actuator.

’078 Patent claim 1:

> after determining the plurality of different target states, *translating* each received instructions into one or more translated instructions encoded in the selected respective protocol or protocols, the one or more translated instructions including the determined plurality of different target states

’871 Patent claim 32:

> 32. The method of claim 28, comprising:
> steps for *translating* a command for an actuator from an input format to a format configured to effectuate changes in the actuator;

’680 Patent claim 4:

> 4. The medium of claim 1, wherein the command is a first command, and wherein sending the command to the network address comprises:
> identifying a protocol of the fluid-handling device based on the network address;
> *translating* the first command into a translated command based on the protocol; and
> sending the translated command to the controller.

The parties appear to agree on the plain and ordinary meaning of the term. In its reply brief, Defendants agree with Plaintiff that the “ordinary meaning of ‘translating’ [is] from one protocol to another.” ECF 68 at 5-6. This ordinary meaning appears consistent with its use throughout the spared specification and various claims, in which various forms of “translate” or “translator” are used in the context of changing commands from one protocol to another, specifically into a protocol utilized and understood by a fluid-handling device controller. *See, e.g.*, ’909 Patent at 1:61-64; (“translating the received command into a translated command operative to cause a local controller of the fluid-handling device to drive the fluid-handling equipment to the target state”); *Id.* at 2:17-20 (same); *id.* at 3:4-9 (“Further, the site master-controller 16 of some embodiments

may be operative to translate commands into various device-specific protocols, such that a single implementation of the site master-controller 16 is relatively versatile regardless of the type of fluid-handling device being controlled."); *id.* at 5:13-16 ("the site master-controller 18 translates the received commands into a protocol appropriate for a corresponding fluid-handling device"); *id.* at 7:49-54 ("receive commands from the command-center server 14 and translate those commands in accordance with both protocols of the respective buses 62, 64, or 66 and command formats supported by the fluid-handling devices 38 (e.g., command codes, on-off signals, application-program interfaces, and the like, depending on the device)."); *id.* at 8:62-64 ("the protocol multiplexer 72 selects among the command translators 74, each of which corresponds to a different protocol"); *id.* at 9:5-7 ("command translators 74 may be operative to translate a received command from an input format to a format configured to effectuate changes in the fluid-handling devices"); *id.* at 9:9-13 ("and that command may be translated to different depending on the specific protocol used to communicate with the corresponding valve"); *id.* at 11:39-40 ("the process 104 includes translating the received command into a translated command based on the identified protocol"); '078 Patent claim 1 ("translating each received instructions into one or more translated instructions encoded in the selected respective protocol or protocols"); '871 Patent claim 32 ("translating a command for an actuator from an input format to a format configured to effectuate changes in the actuator"); '680 Patent claim 4 ("identifying a protocol of the fluid-handling device based on the network address" and "translating the first command into a translated command based on the protocol").

Defendants do not argue that the patentee acted as a lexicographer or narrowed the scope of plain and ordinary meaning through disclaimer, which are the only two exceptions to the general rule that a term should be construed as having its plain-and-ordinary meaning. *Azure Networks*,

771 F.3d at 1347; *Thorner*, 669 F.3d at 1365. Indeed, Defendants state that the term translating "is not explicitly defined in the specification of the Asserted Patents." ECF 56 at 32. Instead, Defendants assert that "there is little in the patents to explain the critical details of *how* translation is accomplished." *Id.* (emphasis in original); *see also* ECF 68 at 6 ("The specification does not explain how translation occurs."). Defendants' arguments regarding indefiniteness perhaps may relate to potential assertions of lack of written description or lack of enablement, but do not demonstrate any lack of reasonable clarity of the claim language.

Defendants attempt to incorporate additional claim limitations found in claim 1 of the '909 Patent as "added limitations" to the term. ECF 68 at 5-6. The shared specification and use of "translating" in context of the claims do not support Defendants' position. As shown above in relation to usage in various claims, these limitations are not used throughout the asserted claims in conjunction with "translating." Compare, *e.g.*, '909 Patent claim 1 with '871 Patent claim 32. Even if all claims contained the same limitations in conjunction with "translating," reading such limitations into the meaning of the term would make their recitation elsewhere in the claims superfluous and be contrary to basic tenets of claim construction.

Contrary to Defendants' argument, a term does not require explicit definition in a patent specification to meet the requirements of 112(b). *See Nautilus*, 572 U.S. at 910 (stating that, for purpose of definiteness, a claim must only "inform those skilled in the art about the scope of the invention with reasonable certainty."). The patentee evidently relied on the plain meaning of this term, and "[t]he patentee is free to choose a broad term and expect to obtain the full scope of its plain and ordinary meaning unless the patentee explicitly redefines the term or disavows its full scope." *Thorner*, 669 F.3d at 1367.

Defendants' argument that the specification lacks sufficient detail or guideposts to identify what may or may not qualify as "translating" in the claims is unpersuasive, and Defendant has failed to prove by clear and convincing evidence that the term is indefinite. The specification provides details of how translation works in reference to the claimed invention, and the claims provide additional contextual limitations regarding the operation of translating steps. *See, e.g.*, '909 Patent at 5:13-16; 7:47-53; 8:56–9:4; 9:5-7; 9:17-21; 16:43-49.

The Court therefore expressly rejects Defendants' indefiniteness arguments, and no further construction is necessary. *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*, 521 F.3d at 1362 ("[D]istrict courts are not (and should not be) required to construe every limitation present in a patent's asserted claims."); *Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) ("Unlike *O2 Micro*, where the court failed to resolve the parties' quarrel, the district court rejected Defendants' construction."); *Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 977–79 (Fed. Cir. 2021).

Therefore, for the reasons described above, the Court concludes that the term "**translating**" is not indefinite and should be construed according to its **plain meaning**.

C. Term #3: "at least some of the translated command"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #3: "at least some of the translated command" U.S. Patent No. 8,649,909, Cl. 1 Proposed by Plaintiff	at least some of the translated commands	Indefinite

ECF No. 76 at 3.

The Parties' Positions

Defendants argue[5] that the use of the singular "command" in the context of claim 1 results in indefiniteness, because Defendants allege there is "no disclosure in the patent, nor any way for a POSITA to ascertain, how a singular command could be sub-divided into operative and non-operative portions." ECF 56 at 33. Defendants also argue that the use of "at least some" is a "term of degree"[6] that would be indefinite "unless 'the patent specification provides some benchmark for measuring that degree,'" which Defendants argue is lacking. *Id.* (quoting *Vapor Point LLC v. Moorhead*, No. 4:11-cv-4639, 2013 WL 11275459, at *20 (S.D. Tex. 2013)). Defendants also

[5] During the *Markman* hearing, counsel for Defendants clarified to the Court that Defendants' sole basis for arguing indefiniteness for this term was the use of the term "translated," in reference to their position for Term #2. *Markman* Hr'g Tr. 19:5-8 Jan. 26, 2024. The Court addressed and rejected this argument with respect to Term #2, *supra*. The Court will therefore only address Defendants' remaining arguments as to why Plaintiff's proposed construction is improper.

[6] In addition to waiving this argument during the *Markman* hearing, Defendants' additional indefiniteness argument regarding use of "at least some" is inconsistent with Defendants' position in other asserted claims. The term "at least some" also appears in asserted claims 8 and 11 of the '909 Patent, asserted claims 7 and 18 of the '014 Patent, asserted claims 18, 19, 22, and 31 of the '871 Patent, asserted claims 1, 3-7, 11-12, and 15 of the '078 Patent. This includes other instances in which it is utilized in relation to translated instructions or commands. *See, e.g.*, '078 Patent claims 1, 3-6, 15. Defendants did not raise the issue of indefiniteness with respect to any of these instances, even among the 44 terms identified in their opening brief. *See* ECF 56.

argue that there is no antecedent basis for the "at least some" language to assist a POSITA determine what portion of the command might be operative. *Id.*

Plaintiff responds that, in the context of the claims and the patent, "it is clear that this term should be construed as 'at least some of the translated commands" or that it may be judicially corrected to the same. ECF 65 at 11. Plaintiff points to the claim language and specification, which "repeatedly call for multiple commands to be translated and then received by the local controller," citing multiple examples. *Id.* at 11-12. Plaintiff further responds that Defendants' reliance on *Vapor Point* for support that the "at least some" language is indefinite is unfounded, because the court in *Vapor Point* held that the same language was definite in light of the claim and specification. *Id.* at 12. Plaintiff argues that, similarly, the '909 Patent specification provides examples such that a POSITA would understand the term to mean "two or more" translated commands in context. *Id.*

Defendant replies that the use of singular is not an error evident on the face of the patent and is subject to reasonable debate, and that the patentee should have sought a certificate of correction if the claim language was a mistake. ECF 68 at 6. Defendant further replies that because the patent specification includes instances of both singular "command" and plural "commands" language, there are conflicting possible interpretations. *Id.* at 7. Defendant also argues that SitePro is "suggesting that a POSITA would understand that the singular term 'translated command' should always be the plural term 'translated commands,'" disregarding other use in claim 1 of "each translated command." *Id.*

Plaintiff replies that Defendants' reply argument about changing the term "each translated command" to a plural is a straw man because it does not reflect Plaintiff's position and the term at issue is "at least some of the translated command." ECF 73 at 5-6. Instead, Plaintiff reiterates that

the only single error is at 16:49-50. *Id.* at 6. Plaintiff argues that Defendants have not submitted any evidence that one skilled in the art does not understand the claim bounds, and that the errors meet the Federal Circuit's two-part test for correction in *Novo*. *Id.* at 6 n.5. Plaintiff further replies that the claim's repeated use of "commands" makes it obvious the plural form was intended, and the use of the phrase "at least some of" indicates the plural form was intended. *Id.* at 6. (citing Durham Decl. at ¶ 48).

The Court's Analysis

Claim 1 of the '909 patent recites in relevant part (emphasis added):

> receiving, via the network interface, from the command-center server, *a plurality of commands* encoded in a first protocol to control the fluid-handling devices from a user corresponding to one of the user accounts, different commands among *the plurality of commands* being directed to different fluid handling devices among the plurality of fluid-handling devices;
>
> for *at least some of the plurality of commands*, determining a plurality of different target states of a given one of the fluid-handling devices over time, wherein the respective site-master controller is operative to maintain control of the fluid handling devices in the absence of a network connection to the command-center server;
>
> *translating the plurality of commands into translated commands* encoded in a plurality of protocols different from the first protocol, *each translated command being translated into a protocol among the plurality of protocols* suitable for a fluid-handling device to which the respective command is directed, the *at least some of the translated command* being operative to cause a local controller of the given fluid-handling device to drive the given fluid-handling device to the plurality of different target states, the local controller being responsive to *the translated commands* and feedback from the given fluid-handling device indicative of whether the given fluid-handling device is in a target state; and
>
> *sending the translated commands* to respective local controllers of the respective fluid-handling devices to which the respective commands are directed.

Plaintiff identifies the use of the singular "command" as a mistake that should be corrected by the Court. Defendants argue that it is reasonable to conclude that the use of the singular "command" in context of the claim is intentional and proper. ECF 68 at 6-7. Defendants cite to a preceding term, "each translated command being translated into a protocol among the plurality of protocols," as evidence that the use of singular was intentional. *Id.* at 7.

Applying the Federal Circuit's test for judicial correction, Plaintiff's requested correction is appropriate. The intrinsic record shows that the requested correction is not subject to reasonable debate, and Defendants have not identified any portion of the prosecution history as suggesting a different interpretation of the claim. The structure of the claim makes it clear that there is only one reasonable interpretation for "at least some of the translated command," specifically "at least some of the translated commands." Claim 1 recites instructions within the processor memory that cause the performance of certain steps. The first recited step includes "receiving . . . *a plurality of commands* encoded in a first protocol to control the fluid handling devices." '909 Patent, claim 1 (emphasis added). This element provides the antecedent basis for the later-occurring term "the plurality of commands." The second recited step includes "for *at least some of the plurality commands*, determining a plurality of different target states of a given one of the fluid handling devices over time." *Id.* (emphasis added). This step provides the antecedent basis for the "the at least some" portion of the term "the at least some of the translated command." The next step recites, in part, "*translating the plurality of commands* into *translated commands* encoded in a plurality of protocols different from the first protocol," and reciting that "each translated command being translated into a protocol among the plurality of protocols suitable for a fluid-handling device to which the respective command is directed." *Id.* (emphasis added). As identified, the "plurality of commands" are translated into "translated commands" that are encoded "in a plurality

of protocols" and of those plurality of "translated commands," and each individual translated command is translated into a single protocol. Then the claim recites that "*the at least some of the translated command* being operative to cause a local controller of the given fluid-handling device to drive the given fluid-handling device *to the plurality of different target states*, the local controller being responsive to *the translated commands*." *Id.* (emphasis added). The next step recites "sending *the translated commands* to respective local controllers of the respective fluid-handling devices to which the respective commands are directed." *Id.* (emphasis added).

The proposed correction will not impact the scope of the claim, as the correction aligns with how a skilled artisan would understand the limitation in its uncorrected form. The claim consistently uses the plural term "commands," including preceding phrases that provide antecedent basis to the term at issue and subsequent claimed steps. A plurality of commands are received, and for at least some of them, a plurality of different target states of a given fluid-handling device over time are determined, and the plurality of commands are translated into a plurality of protocols, with each command translated into a single protocol. *Id.* The "at least some" of the translated commands—those for which "a plurality of different target states" of a given fluid-handling device over time was determined—are defined as being operative to cause a controller of "the given fluid-handling device" to drive the given device "to the plurality of different target states." *Id.* The local controller of the given fluid-handling device is "responsive to the translated commands" and the entirety of the "translated commands" (rather than subset "the at least some of the translated command[s]") are sent to "respective local controllers of the respective fluid-handling devices." *Id.* The only reasonable construction in this context is "at least some of the translated commands." The "at least some" translated commands are operative to drive a controller of a given fluid-handling device to a plurality of different target states over time. *Id.* Further, the term "each

translated command" cannot provide antecedent basis for "the at least some of the translated command[s]" term, because the latter connotes multiple such translated commands (each one of the plurality of translated commands), rather than a single command. Defendants' citations to embodiments in the specification reciting the receipt and translation of a single command do not alter the clarity of the term meaning in the context of claim 1, in which multiple commands are received and translated.

The Court accordingly judicially corrects the disputed phrase, **"at least some of the translated command"** to "**at least some of the translated commands**."

D. Term #4: "the operation of the fluid-handling device"

Term	**Plaintiff's Proposed Construction**	**Defendants' Proposed Construction**
Term #4: "the operation of the fluid-handling device" U.S. Patent No. 8,649,909, Cl. 2 Proposed by Plaintiff	Plain and ordinary meaning[7]	Indefinite

ECF No. 76 at 4.

The Parties' Positions

Defendants argue that the term "the operation of the fluid-handling device" lacks antecedent basis and is therefore indefinite. Defendant states that the term as written is unclear as to what operations of the fluid-handling device the claims are referencing. ECF 56 at 30-31. Defendants further argue that, given this lack of clarity, it would be erroneous to redraft or correct the language as proposed by Plaintiff. *Id.* at 31. Defendants recommend that the Court "should

[7] Defendants' opening brief identifies Plaintiff's initial proposed construction of this term as "an operation of the fluid-handling device," ECF 56 at 30, but subsequent briefing indicates that Plaintiff's position changed to proposing plain and ordinary meaning. ECF 65 at 13; ECF 68 at 8.

apply the plain and ordinary meaning as it comports with the claim language and is in accordance with the specification." *Id.*

Plaintiff responds that "it is clear that this was a clerical error" that can be construed as the plain and ordinary meaning, or alternatively the term may be judicially corrected and is not indefinite. ECF 65 at 13. Plaintiff further responds that the specification identifies different types of fluid-handling devices that are capable of many different operations, such that a POSITA would understand that a fluid-handling device can have multiple operations.

Defendants reply that Plaintiff's understanding of the term constitutes a "boundless definition" that supports indefiniteness. ECF 68 at 8. Defendants argue that effectively transforming "the operation" to "any operation" would be improper because there is a reasonable debate regarding whether the claim language as drafted requires correction, such that it should not be corrected by the Court. *Id.* (citing *Uniloc USA Inc. v. Samsung Elecs. Am., Inc.*, 2019 U.S. Dist. LEXIS 64337, *36 (E.D. Tex. April 15, 2019)). Defendants further reply that Plaintiff's citations to the specification do not inform a skilled person "whether a specific operation or the operations of the devices as a whole are intended," such that the citations do not support definiteness. *Id.*

Plaintiff replies that Defendants cannot persuasively argue that a person of ordinary skill would have an alternative understanding because the testimony from Dr. Durham is unrebutted. ECF 73 at 7. Plaintiff further replies that a claim term is not indefinite merely because it is subject to differing interpretations. *Id.* (citing *Nevro Corp. v. Boston Sci. Corp.*, 955 F.3d 35, 41 (Fed. Cir. 2020)). Plaintiff argues that an understanding of the plain meaning of the term to refer to "any operation of the fluid handling device" does not expand the scope of the claim. *Id.* Plaintiff argues that *Uniloc* is inapplicable because in that case, both parties offered supporting evidence from the claims and specification to support their proposed fix to an error, while here Defendants have

offered no evidence to show how a person of skill would interpret the claim. *Id.* Plaintiff further distinguishes *Novo*, which was cited in *Uniloc*, on the basis that in that case the party opposing correction provided support from the prosecution history that the correction was inappropriate. *Id.* at 7-8.

The Court's Analysis

Claim 2 of the '909 patent recites (emphasis added):

> 2. The system of claim 1, wherein the memory also stores instructions that when executed by the processors cause the processors to effectuate steps comprising:
>
> receiving, from the fluid-handling device, sensor data indicative of *the operation of the fluid-handling device* obtained by sensors of the fluid-handling device; and
>
> sending, to a remote data store, the received sensor data.

Both parties request that the plain and ordinary meaning of the term be applied, but the parties disagree as to the effect of that construction. Defendants argue it results in a finding of indefiniteness. There is no antecedent basis for "the operation of the fluid-handling device" in claims 1 or 2 of the '909 Patent. Although this lack of antecedent basis may indicate a potential indefiniteness problem, it is not determinative. *See Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008) ("[A] claim could be indefinite if a term does not have proper antecedent basis where such basis is not otherwise present by implication or the meaning is not reasonably ascertainable.") (citation omitted); *Phillips*, 415 F.3d at 1316-17 ("Indeed, the rules of the PTO require that application claims must 'confirm to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.'"); *Energizer Holdings, Inc. v. ITC*, 435 F.3d 1366, 1370-71 (Fed. Cir. 2006); *see also* MPEP § 2173.05(e) ("Obviously, however, the failure to

provide explicit antecedent basis for terms does not always render a claim indefinite. If the scope of a claim would be reasonably ascertainable by those skilled in the art, then the claim is not indefinite.”). Therefore, in evaluating whether the lack of antecedent basis renders the claim indefinite, the Court must determine whether the claim, when viewed in light of the intrinsic evidence, informs those skilled in the art about the scope of the invention with reasonable certainty.

Plaintiffs argue that the scope of the claim “allows for any operation that a POSITA would understand could be performed with a fluid-handling device.” ECF 65 at 14-15. Defendants argue that the term requires identification of a single fluid-handling device operation. ECF 68 at 8. In their analyses, both Plaintiff and Defendants focus on the term “the operation of the fluid-handling device” in isolation, and fail to analyze the term in the context of the claim.

Claim 2 recites in part the step of “receiving, from the fluid-handling device, sensor data indicative of the operation of the fluid-handling device obtained by sensors of the fluid-handling device.” This claim language is reasonably clear when read in the context of the specification. The patent identifies and provides examples of various fluid-handling devices. *See, e.g.*, ’909 Patent at 1:11-22. The specification indicates that a fluid-handling device “may include . . . a sensor 56 by which process parameters are measured.” *Id.* at 5:34-38. The specification further identifies the types of sensors for fluid-handling devices and the types of data they obtain that are “indicative of the operation of” fluid-handling devices (*i.e.*, indicative of how such fluid devices are operating according to process parameters). For example, the specification states, “Fluid-handling devices 38 may include a variety of types of sensors, for instance, a temperature, viscosity, flowrate, fluid level, pressure, conductivity, or other parameter sensor.” *Id.* at 5:39-42. An example in the specification identifies that the fluid-handling device may “return a value sensed by sensor 56, for example a measured pump speed, pressure or flowrate.” *Id.* at 6:57-59. The specification further

states that, in some embodiments, "the sensor data is retrieved regardless of whether a command was issued, for example periodically to monitor the state of the fluid-handling device." *Id.* at 11:61-63. A person skilled in the art, when reading claim 2 in light of the intrinsic evidence, would be able to identify the scope of the invention with reasonable certainty according to its plain meaning. The patent specification identifies the types of sensor data that are "indicative of the operation of the fluid-handling device" and that are "obtained by sensors of the fluid-handling device," such that one of ordinary skill could identify the scope of the claim in reference to this element.

Turning to the prosecution history, Claim 2 was introduced with the original '557 Application and issued without amendment. Claim 1, as originally submitted, also did not include an antecedent basis for "the operation of the fluid-handling device." The parties do not identify any relevant information in the prosecution history, and nothing in the prosecution history appears to be contrary to the Court's understanding. Defendants have failed to prove indefiniteness by clear and convincing evidence.

The Court therefore expressly rejects Defendants' indefiniteness argument.[8] Based on the discussion above of the claim, specification, and prosecution history, no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79.

The Court accordingly concludes that the term **"the operation of the fluid-handling device"** is not indefinite and should be construed according to its **plain meaning**.

[8] The Court also rejects Plaintiff's argument that the term "the operation of the fluid-handling device" contains a clear clerical error that can and should be corrected.

E. Term #5: "the operation of an oil well, a petro water disposal or re-injection facility or a petroleum pumping station"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #5: "the operation of an oil well, a petro water disposal or re-injection facility or a petroleum pumping station" U.S. Patent No. 8,649,909, Cl. 3 Proposed by Plaintiff	Plain and ordinary meaning	Indefinite

ECF No. 76 at 4.

The Parties' Positions

Defendants make the same argument as with the prior term—that "the operation" language lacks antecedent basis and a construction or modification to this language would improperly expand the scope of the claim. ECF 56 at 31. Defendants request the Court apply the plain and ordinary meaning.

Plaintiff responds, as with the prior term, that the lack of antecedent basis is a clear clerical error that can be construed as the plain and ordinary meaning, or alternatively judicially corrected. ECF 65 at 15-16. Plaintiff cites disclosures in the specification identifying various operations for identified types of fluid-handling sites. *Id.* at 16. Plaintiffs reply that based on this support, a skilled person "would understand there are various operations across the different types of facilities and thus the correct construction should include an 'an' before operation." *Id.*

Defendants reply that there is no disclosure in the specification of how a skilled person "can determine which of the many operations is '*the* operation' in the context of 'receiving . . . a

request for a data [sic] indicative of the operation of an oil well, a petro water disposal or re-injection facility,'" particularly given the lack of antecedent basis. ECF 68 at 8-9.

Plaintiff replies that Defendants are attempting to "force additional unsupported limitations into the claim." ECF 73 at 8. Plaintiff argues that, because the invention is "directed to the *system for remotely controlling*" fluid handling cites, rather than control of certain operations, "the kinds of operations that a fluid-handling site might engage in has no relevance because *any* such operations are within the claim's scope" so long as they are controlled remotely and otherwise meet the claim limitations. *Id.* (emphasis in original). Plaintiff further argues that "fluid-handling sites" do not have an "overall operation," such that limiting claim scope to a single operation of a fluid-handling site would be "counter to the specification's teaching that fluid-handling sites are varied in kind and often engage in a plurality of operations. *Id.*

The Court's Analysis

Claim 3 of the '909 patent recites (emphasis added):

> 3. The system of claim 2, comprising the remote data store and a web-server, wherein the web-server is operative to perform steps comprising:
> receiving, from a user device, a password corresponding to a selected one of the user accounts;
> receiving, from the user device, a request for a data indicative of *the operation of an oil well, a petro water disposal or re-injection facility, or a petroleum pumping station* coupled to the fluid-handling device of the selected one of the user accounts;
> retrieving, from the data store, data responsive to the request from the user device; and
> sending, to the user device, the retrieved data for presentation to the user.

Once again, both parties request the plain and ordinary meaning be applied the term, although Defendants argue this results in indefiniteness. As with the prior term, use of "the operation" language lacks antecedent basis, so the Court must determine whether the claim, when

viewed in light of the intrinsic evidence, informs those skilled in the art about the scope of the invention with reasonable certainty.

The relevant claim term in its entirety is "receiving, from the user device, a request for a data indicative of the operation of an oil well, a petro water disposal or re-injection facility, or a petroleum pumping station coupled to the fluid-handling device of the selected one of the user accounts." This claim language is reasonably clear when read in the context of the specification. The patent identifies and provides examples of various fluid-handling devices. *See, e.g.*, '909 Patent at 1:11-22. The entire term recites "a request for a data indicative of the operation of" various types of facilities that are "coupled to the fluid-handling device of the selected one of the user accounts." The specification provides several examples of requests from a user device to a web server for data that indicate the operation of (*e.g.*, process data or sensor data for) facilities that are coupled to identified fluid-handling devices of a user account. For example, the specification states:

> The *web server 32 may also be operative to send instructions to present reports*, and interfaces by which such reports are selected, *to the user devices 26 or 28 responsive to user requests for such information* or interfaces. As explained in greater detail below, the *site master-controller 16 may report various process data, and the web server 32 may present this process data to users upon request*. This process data may be stored in the data store 34.
>
> In the data store 34 of some embodiments, the site master controllers 16 may be organized according to user accounts, with each site master-controller 16 corresponding to at least one user account and some user accounts corresponding to multiple site master-controllers 16, *as some users may have, for example, a plurality of oil wells or other facilities which the user wishes to control or monitor*. In some embodiments, the data store 34 includes a plurality of account records, each account record having one or more user names, one or more user passwords, billing information (e.g., billing address, subscription price, and invoicing data), and identifiers of one or more site master-controllers (e.g. an IP address of each site master-controller) with which users under the

> corresponding account are authorized to interact (e.g., issue commands or view reports of data from the site master-controller).

'909 Patent at 3:63-4:18 (emphasis added); *see also id.* at Fig. 1. It further states:

> The illustrated site server 36 may be operative to interface between the command-center server 14 and the site master controllers 16 by *directing commands received via the web server 32 to the site master-controller 16 to which the command is addressed and receiving process data from the respective site master-controllers to be stored in the data store 34 or presented to the users via the web server 32*.
>
> ***
>
> The *web server 32 and site server 36 may be operative to issue queries to the data store 34 to implement requests from the user devices 26 or 28*, and the web server 32 may communicate with the site server 36 to effectuate commands.
>
> In some embodiments, *each site master-controller 16 controls a respective fluid-handling site* 24 (only one of which is shown for site master-controller 18, though each of the other site master-controllers 20 and 22 may be associated with their own, differently located fluid-handling site, or some sites may have multiple site master controllers). The site master-controller 16 may receive commands from the command-center server 14 and implement those commands to completion, for example without further feedback to, and control signals from, the command-center server 14, such that the command can be executed even if a network connection to the command-center server 14 is temporarily lost. Further, the *site master-controller 16 may be operative to report process data to the command-center server 14 for storage in the data store 34 and presentation via the web server 32 on user devices 26 and 28*.

Id. at 4:24-30, 44-63 (emphasis added). In reference to Figure 2, illustrating a remote-control process of a fluid-handling site, the specification further states:

> In some embodiments, the process 104 includes receiving, via a network interface, from a remote user device, (e.g., via a command-center server) a command to change a state of a fluid-handling device to a target state, as illustrated by block 106. The command may be received from, for example, the above-describes site server 36, *which may have received the command from a remote user device via a web browser of the user device*.
>
> ***

> In some embodiments, the process 104 includes *receiving sensor data from the fluid-handling device confirming that the command was executed*, as illustrated by block 114. As with the other features described herein, not all embodiments include this step. Using this data, some embodiments may exercise feedback control or *may retrieve sensor measurements following the execution of a command for reporting to the user device*.
>
> ***
>
> In some embodiments, the process 104 further includes *periodically sending the sensor data to the remote server for reporting to the user device*, as illustrated by block 118. Periodically, data from the report buffer may be transmitted to the above-described command-center server 14 *for compilation of reports requested by user devices 26 to 28*. Similarly, *alarms or other log data issued by fluid-handling devices may also be retrieved, stored, and transmitted to the command center server 14 for reporting*.

Id. at 11:16-23, 53-61; 12:5-13 (emphasis added); see also *id.* at Fig. 2.

As with claim 2, the parties' myopic view of the identified claim term results in neither party properly analyzing the term in the context of the claim and the specification. A person skilled in the art, when reading claim 3 in light of the intrinsic evidence, would be able to identify the scope of the invention with reasonable certainty according to its plain meaning. The patent specification identifies examples of a web-server operative to perform the step of receiving, from a user device, a request for data indicative of the operation of various types of facilities coupled to a fluid-handling device of a selected user account, such that one of ordinary skill could identify the scope of the claim in reference to this element.

Claim 3 was also introduced with the original '557 Application and issued without amendment. Claim 1, as originally submitted, also did not include an antecedent basis for "the operation of an oil well . . ." The parties do not identify any relevant information in the prosecution

history, and nothing in the prosecution history appears to be contrary to the Court's understanding. Defendants have failed to prove indefiniteness by clear and convincing evidence.

The Court therefore expressly rejects Defendants' indefiniteness argument.[9] Based on the discussion above of the claim, specification, and prosecution history, no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79.

The Court accordingly concludes that **"the operation of an oil well, a petro water disposal or re-injection facility or a petroleum pumping station"** is not indefinite and should be construed according to its **plain meaning**.

F. Term #6: "processes"

Term	**Plaintiff's Proposed Construction**	**Defendants' Proposed Construction**
Term #6: "processes" U.S. Patent No. 8,649,909, Cl. 9 Proposed by Plaintiff	processors	Plain and ordinary meaning

ECF No. 76 at 4.

The Parties' Positions

The parties originally agreed the construction of "processes" should be its plain and ordinary meaning. ECF 56 at 3; ECF 65 at 17. In its responsive brief, Plaintiff argues that the term is a clerical error and should be corrected to "processors." ECF 65 at 17. Plaintiff argues that, because claim 1 from which claim 9 depends does not include "processes" but instead uses the

[9] The Court also rejects Plaintiff's argument that the identified term contains a clear clerical error that can and should be corrected.

term "processors," a skilled person would understand that "the one or more processes" in claim 9 should instead refer to the "one or more processors" of claim 1. *Id.*

Defendants respond that the specification identifies and uses the two terms differently, such that "processes are things that are executed by processors." ECF 68 at 9. Defendants argue that because the alleged error is not plain in the patent and there is reasonable debate about whether an error occurred, the term is not subject to judicial correction. *Id.* (citing *Uniloc*, 2019 U.S. Dist. LEXIS 64337 at *36); *Novo Indus.*, 350 F.3d at 1354.

Plaintiff replies that the use of the phrase "one or more processors" in claim 1 and the lacking antecedent basis for "processes" in claim 9 provide sufficient information to conclude that the term was a clerical error. ECF 73 at 9. Plaintiff further replies that a person of skill would understand that processors "communicate with a fluid-handling device." *Id.* (citing '909 Patent at 16:23). Plaintiff states that Defendants do not point to any specification or prosecution history references that support a "process" communicating with fluid-handling devices. *Id.*

The Court's Analysis

Claim 9 of the '909 patent recites (emphasis added):

> 9. The system of claim 1, comprising a remote terminal unit through which *the one or more processes* communicate with the fluid-handling device among the plurality of fluid-handling devices, wherein translating the received commands comprises:
>
> identifying an address on a serial bus corresponding to a component of the fluid-handling device responsive to the received command;
>
> identifying a command code operative to cause the component to execute the received command; and
>
> sending to the address on the serial bus the command code.

Claim 1 of the '909 patent does not use the term "processes," but does recite the phrase "one or more processors." Claim 9 was introduced with the original '557 Application and issued without amendment. Although claim 1 was amended during prosecution, at the time of initial

application the claim similarly recited the phrase "one or more processors" but did not use the term "processes."

The Court may correct an error in a patent claim "only if (1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims." *Novo Indus.*, 350 F.3d at 1354; *Chef Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1374 (Fed. Cir. 2004) ("[C]ourts may not redraft claims, whether to make them operable or to sustain their validity."). In this instance, the proposed correction is subject to reasonable debate based on consideration of the claim language and specification, so it is not amenable to judicial correction. The patent specification includes numerous citations to both "processes" and "processors." The term "process" or "processes" is used, *inter alia*, to describe steps performed by various physical elements of the claimed system, including communication with a fluid-handling device. *See, e.g.*, '909 Patent at 11:44-50 ("The process 104 may also include sending the translated command to a local controller of the fluid-handling device via the identified control bus, as illustrated by block 112."); *id.* at 11:53-55 ("In some embodiments, the process 104 includes receiving sensor data from the fluid-handling device confirming that the command was executed, as illustrated by block 114."). Although the specification identifies that "processes and modules described herein may be executed by one or more processing systems," '909 Patent at 12:24-26, such disclosure does not mean that it is unreasonable for the claim to recite "processes" communicating with physical devices such as a fluid-handling device. Other than the identified lack of antecedent basis, the claim could be reasonably understood by a skilled person in light of the specification without correction. The Court therefore rejects Plaintiff's proposed construction.

Defendants have not alleged indefiniteness of this claim term, so no further construction is necessary. The Court accordingly concludes that the term **"processes"** should be construed according to its **plain meaning**.

G. Term #7: "each [ ] instructions"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #7: "each [ ] instructions" U.S. Patent No. 9,342,078, Cls. 1, 3-4 Proposed by Plaintiff	each [] instruction	Indefinite

ECF No. 76 at 4.

The Parties' Positions

Defendants argue that the multiple occurrences of the phrase "each [] instructions" in claims 1, 3, and 4 of the '078 Patent are indefinite because it is not clear "whether each individual instruction in a group is meant or each grouping of instructions." ECF 56 at 35. Defendants argue that these terms are indefinite because a skilled person could not readily ascertain the scope of the claim.

Plaintiff responds that this term is a clear typographical error, and that it should be construed as "each [] instruction" or judicially corrected to the same. ECF 65 at 18. Plaintiffs further reply that a skilled person would understand that the modifier "each" would mean that only one instruction applies. *Id.* Plaintiffs respond to Defendants' indefiniteness argument by stating that the specification supports that "instructions may be translated and sent on an individualized basis; thus confirming that the modifier 'each' should be used with the singular term 'instruction.'"

Id. Plaintiffs argue that Defendants do not cite to support in the patent or prosecution history for an alternative to Plaintiff's proposed language. *Id.*

Defendants reply that Plaintiff's proposed construction creates ambiguity as Defendants argue that it results in a lack of antecedent basis for a later term in claim 1, "wherein at least some of the translated instructions." ECF 68 at 10. Defendants further reply that the proposed construction would contradict the specification, which discloses translating and sending both single instruction embodiments and embodiments with a series of instructions. *Id.* Defendants also cite to the prosecution history of the application that became the '078 Patent, in which the patentee argued that the phrase "after determining the plurality of different target states, translating each received instructions into one or more translated instructions" distinguished the claims from prior art. *Id.* (citing Aug. 18, 2015, Response to Office Action at 15). Defendants reply that because the alleged error is not plain and there is reasonable debate about the correction, judicial correction is not proper. *Id.* at 10-11.

Plaintiff replies that the antecedent basis is earlier in the claim: "after determining the plurality of different target states, translating each received instructions into *one or more translated instructions*[.]" ECF 73 at 9. Therefore, Plaintiff alleges a correction would not create an improper lack of antecedent basis. *Id.* Plaintiff further replies that Defendants' ambiguity arguments ignore the specification. *Id.* at 9-10. Plaintiff posits that Defendants' specification contradiction argument identifying both single and multiple instructions as being translated does not render the term indefinite "if the language itself is clear," and the modifier "each" signals use of the singular. *Id.* at 10. Plaintiff argues that Defendants' citation to prosecution history fails because the arguments were unrelated to whether "instructions" were singular or plural, and were related to the added term "after determining the plurality of different target states." *Id.* (citing Aug. 18, 2015, Response

to Office Action at 15). Plaintiff also argues that the "only reason" the typo appears in the prosecution history is "because the prosecuting attorney was quoting directly from the claim, where the error already existed." *Id.* (citing *Vidir Mach. Inc. v. United Fixtures Co.*, 570 F. Supp. 2d 693, 707 n.10 (M.D. Pa. 2008), for proposition that careless patent drafting does not create ambiguity nor demonstrate a person of skill would be unable to discern its readily understood meaning in the context of the patent).

The Court's Analysis

Claims 1, 3, and 4 of the '078 Patent recite (emphasis added):

> 1. A method, comprising:
> *receiving*, via a network interface*, a plurality of user-directed instructions* to control fluid-handling devices that monitor or control one or more fluids at an oil well, a petro water disposal or re-injection facility, or a petroleum pumping station, the plurality of instructions being received encoded in a shared protocol;
> obtaining a target state of at least one of the fluid-handling devices based on at least some of the plurality of instructions, wherein obtaining a target state of at least one of the fluid-handling devices based on at least some of the plurality of instructions comprises:
> after receiving the instructions, determining a plurality of different target states of the at least one of the fluid-handling devices, the plurality of different states each corresponding to different times;
> for *each of the plurality of instructions*, selecting a respective protocol or protocols from among a plurality of protocols different from the shared protocol, wherein the respective fluid-handling device or devices to which the respective instruction is directed are responsive to the selected respective protocol or protocols, wherein at least some of the selected protocols are different from one another;
> after determining the plurality of different target states, *translating each received instructions* into one or more *translated instructions* encoded in the selected respective protocol or protocols, the one or more translated instructions including the determined plurality of different target states; and
> sending *each translated instructions* to at least the fluid-handling device to which the respective translated instruction is directed,

> wherein at least some of the translated instructions are effective to cause the at least one of the fluid-handling devices to attempt to achieve the target state.
>
> 3. The method of claim 2, wherein sending *each translated instructions* to at least the fluid-handling device to which the respective instruction is directed comprises:
>
> sending an address of the identified fluid-handling device on the identified bus in association with at least some of the translated instructions.
>
> 4. The method of claim 2, wherein sending *each translated instructions* to at least the fluid-handling device to which the respective instruction is directed comprises:
>
> providing at least some of the translated instructions to a link-layer device connected to the identified bus; and
>
> encoding the translated instructions with the link-layer device in accordance with the physical medium by which the identified bus is implemented.

Within these three claims are five separate instances of the term "each [] instructions." They appear in claim 1 at 16:25 ("for *each of the plurality of instructions*"), claim 1 at 16:34 ("translating *each received instructions* into one or more translated instructions"), claim 1 at 16:39 ("sending *each translated instructions*"), and claims 3 and 4 ("The method of claim 2, wherein sending *each translated instructions*").

The specification states the following within the Summary of the Invention:

> In some aspects, the present techniques include a system for remotely controlling fluid-handling device of an oil well, a petro water disposal or re-injection facility, or a petroleum pumping station, the system including: an input/output module operable to communicate with a fluid-handling device; a network interface; memory; and one or more processors communicatively coupled to the input/output module, the network interface, and the memory, wherein the memory stores instructions that when executed by the processors cause the processors to effectuate steps including: *receiving, via the network interface, from a remote user device, a command* to change a state of the fluid-handling device to a target state; *translating the received command into a translated command* operative to cause a local controller of the fluid-handling device to

> drive the fluid-handling equipment to the target state, the local controller being responsive to the command and feedback from the fluid-handling device indicative of whether the fluid-handling device is in the target state; and *sending the translated command to the local controller*.
>
> Some aspects include a tangible, non-transitory machine-readable medium storing instructions that when executed by a data processing apparatus cause the data processing apparatus to perform operations including: *receiving, via the network interface, from a remote user device, a command to change a state of the fluid-handling device to a target state; translating the received command into a translated command* operative to cause a local controller of the fluid-handling device to drive the fluid-handling equipment to the target state, the local controller being responsive to the command and feedback from the fluid-handling device indicative of whether the fluid-handling device is in the target state; and *sending the translated command to the local controller*.
>
> Some aspects include a process, including: *receiving, via the network interface, from a remote user device, a command* to change a state of the fluid-handling device to a target state; *translating the received command into a translated command* operative to cause a local controller of the fluid-handling device to drive the fluid-handling equipment to the target state, the local controller being responsive to the command and feedback from the fluid-handling device indicative of whether the fluid-handling device is in the target state; and *sending the translated command to the local controller*.

'078 Patent at 1:57-2:31 (emphasis added). In each of the examples above, a single command is received from a remote user device, translated, and sent to the local controller of a fluid-handling device. In another example, a command translator "may receive a command to increase a pump speed, and the command translator may determine a corresponding command via calculation or look-up table, such as a modbus 30 function code and associated data, that when conveyed via the control bus 66 causes a corresponding fluid-handling device 40 or 42 to change state." *Id.* at 9:27-33. As identified in this example, a command may include a combination of information types such as "function code and associated data." *Id.*; *see also id.* at 8:66-9:2 ("in some embodiments, the command includes the identifier of the device, actuator, or device to which the command is directed"). As another example, "a command to dislodge a stuck valve may be translated by the

command translator 78 into a sequence of on and off signals conveyed via a high and low voltage on an individual wire corresponding to bus 64." *Id.* at 9:67-10:3.

Defendants equate "command" in the specification to "instruction," *See* ECF 68 at 10, but that equivalence is not supported in the specification. The specification uses the term "instructions" consistently in reference to programming (*e.g.*, script or code) executable by a processor to perform operations. *See, e.g.*, *id.* at 1:64-66; 2:9-12, 44-53; 12:41-53; 13:30-39, 56-57; 14:1-6; 14:60-15:6. As noted above, a "command" may include both code ("instructions") and data that is not instructions. A skilled person would understand based on the specification that a "command" may include one or more "instructions" of various types, and that translation of a command's "instructions" may result in different or greater number of "instructions" than originally received. Defendants' citations to various embodiments in the specification regarding individual or multiple "commands" fails to consider these distinctions. *See* ECF 68 at 10.

The first instance of the identified term is found in claim 1 at 16:25, "for each of the plurality of instructions." Defendants' arguments that it is unclear "whether each individual instruction in a group is meant or each grouping of instructions," ECF 56 at 35, are inapplicable here, as there is no ambiguity or lack of clarity between the use of single and plural. Defendants' reply brief does not address this instance. See ECF 68 at 10. Therefore, the Court rejects Defendants' argument regarding invalidity of the first instance at 16:25, as Defendants have not shown the term to be indefinite by clear and convincing evidence. Further, Plaintiff does not appear to include this instance in its proposed construction. *See* ECF 65 at 17 (only identifying claim 1 at 16:34 and 16:39 for construction). No further construction is necessary, and the court therefore concludes this term should have its plain meaning.

The second instance of the term, at 16:34 of claim 1, is found within the clause, "after determining the plurality of different target states, translating each received instructions into one or more translated instructions encoded in the selected respective protocol or protocols." '078 Patent at 16:33-36. The "each received instructions" refers back to the first clause of the claim, "*receiving*, via a network interface, *a plurality of user-directed instructions* to control fluid-handling devices." *Id.* at 16:10-11. An intermediate step recites "*for each of the plurality of instructions*, selecting a respective protocol or protocols . . . different from the shared protocol," such that for each of the plurality of instructions, the "respective fluid-handling device or devices to which the respective instruction is directed are responsive to the selected protocol or protocols." *Id.* at 25-32. In the relevant step, each of the "received instructions"—such as those within a command—is translated "into one or more translated instructions encoded in the selected respective protocol or protocols" identified in the prior step. Reading the claim language in light of the specification, a person of skill would understand the scope of the claim with reasonable certainty, and Defendants have failed to prove by clear and convincing evidence that the term is indefinite. The Court therefore rejects Defendants' indefiniteness argument.

The remaining three instances, at 16:39 of claim 1, claim 3 and claim 4, recite "sending *each translated instructions* to at least the fluid-handling device to which the respective instruction is directed." '780 Patent at claims 1, 3 and 4 (emphasis added). Claims 3 and 4 depend from claim 2, which depends from claim 1. The antecedent basis for "translated instructions" is in the prior step, reciting "translating each received instructions into *one or more translated instructions* encoded in the selected respective protocol or protocols." *Id.* at 16:34-36. Further, the claim identifies that each of the one or more "translated instructions" is sent to "at least the fluid-handling device to which *the respective instruction* is directed." For the reasons articulated above, a person

of skill, reading the claim language in light of the specification, would understand the scope of the claim with reasonable certainty, and Defendants have failed to prove by clear and convincing evidence that the term is indefinite. The Court therefore rejects Defendants' indefiniteness argument.

The prosecution history does not require a different outcome. During prosecution, claims 1, 3 and 4 were each added as new claims 21, 23 and 24 on February 5, 2015, in response to the examiner's first office action rejection on August 13, 2014. In its amendment, the patentee cancelled all pending claims and added new claims. February 5, 2015, Response to Office Action, Remarks at 1. The examiner issued a final rejection on March 18, 2015, rejecting, *inter alia*, claims 21-24 under 35 U.S.C. § 102(b) as being unpatentable over U.S. Patent No. 7,289,994 (Nixon et al.). March 18, 2015, Final Rejection at 3-14. In response, the patentee amended, inter alia, claim 1 as shown below.

21. (currently amended) A method, comprising:

receiving, via a network interface, a plurality of user-directed instructions to control fluid-handling devices that monitor or control one or more fluids at an oil well, a petro water disposal or re-injection facility, or a petroleum pumping station, the plurality of instructions being received encoded in a shared protocol;

obtaining a target state of at least one of the fluid-handling devices based on at least some of the plurality of instructions, wherein obtaining a target state of at least one of the fluid-handling devices based on at least some of the plurality of instructions comprises:

after receiving the instructions, determining a plurality of different target states of the at least one of the fluid-handling devices, the plurality of different states each corresponding to different times;

for each of the plurality of instructions, selecting a respective protocol or protocols from among a plurality of protocols different from the shared protocol, wherein the respective fluid-handling device or devices to which the respective instruction is directed are responsive to the selected respective protocol or protocols, wherein at least some of the selected protocols are different from one another;

after determining the plurality of different target states, translating each received instructions into one or more translated instructions encoded in the selected respective protocol or protocols; and

sending each translated instructions to at least the fluid-handling device to which the respective translated instruction is directed, wherein at least some of the translated instructions are effective to cause the at least one of the fluid-handling devices to attempt to achieve the target state.

Aug. 8, 2015, Response to Office Action at 1-2. Claims 23 and 24 were not amended. In arguments to the examiner, the patentee made the following remarks with respect to claims 21-24:

Rejections under 35 U.S.C. Section 102(b)

In the office action, claims 21-24, 32-34, 39-43, 51-53, and 58-59 are rejected as allegedly anticipated by U.S. Patent 7,289,994 ("Nixon"). Applicants respectfully ask that the rejection be withdrawn. The independent claims are amended to recite features that the Examiner acknowledged are absent from Nixon on page 46 of the office action. Thus, the cited reference does not disclose all of the features of the pending claims.

Aug. 8, 2015, Response to Office Action at 14. In relation to other claims rejected under 35 U.S.C. § 103 as obvious over Nixon and another reference ("Deans"), the patentee made the following remarks:

> Deans, however, does not teach or suggest, even when considered in hypothetical combination with the other references, the claim feature of "after determining the plurality of different target states, translating each received instructions into one or more translated instructions encoded in the selected respective protocol or protocols," as recited by each independent claim. Moreover, the other cited references do not cure this distinction, and the distinction is incorporated into each of the dependent claims. In view of this difference from the claimed subject matter, Applicants respectfully ask that the rejections under Section 103 be withdrawn.

Id. at 15-16.

Defendants' arguments citing to the file history are unpersuasive, as the amendments to overcome the Nixon reference in the identified claims are unrelated to the terms at issue, and the citation distinguishing other claims from Dean also focused on the amended claim language.

The Court therefore rejects Defendants' indefiniteness arguments and construes the following instances of the term **"each [] instructions"** as follows:

- "**each of the plurality of instructions**" in claim 1 at 16:25 to have its **plain meaning**;
- **"each received instructions**" in claim 1 at 16:34 to mean "**each of the received instructions**"; and
- "**each translated instructions**" in claim 1 at 16:39, claim 3, and claim 4 to mean "**each of the one or more translated instructions**."

H. Term #8: "ramp"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #8: "ramp" U.S. Patent No. 9,342,078, Cl. 8; U.S. Patent No. 11,294,403, Cl. 4; and U.S. Patent No. 11,726,504, Cl. 2 Proposed by Defendants	Plain and ordinary meaning	Indefinite

ECF No. 76 at 4.

The Parties' Positions

Defendants argue that, without a standard in the specification or claims defining what degrees and rates of change would qualify as a "ramp," a skilled person would "have no way of determining whether a given magnitude and/or rate of change infringes the claims." ECF 56 at 35. Therefore, Defendants argue that the related claims are indefinite. *Id.* at 35-36.

Plaintiff responds that, as used in the relevant claims, ramp "is used as a verb and refers to adjusting a parameter of a fluid-handling device." ECF 65 at 19. Plaintiff argues that, because "ramp" is used as a verb and not as an adjective to describe another feature, a person of skill would understand it to not be a term of degree. *Id.* at 20. Plaintiff further responds that, even if the term was a "term of degree," a skilled person would understand that it "refers to a degree of change necessary to achieve the desired target state of the fluid-handling device." *Id.* Plaintiff argues that the claims and specification provide sufficient certainty to understand the scope of the claims and that they should be construed according to plain and ordinary meaning.

Defendants reply that the term "different states" as used in claims 1 and 8 of the '078 Patent are "intangible positions or conditions," and Plaintiff "does not explain how an intangible 'state'—

or a discreet command in a 'series of commands'—can ramp up or down a motor speed or by what degree." ECF 68 at 11. Defendants also reply that "states" are different from "instructions," and the term "ramp" is only applied to "states." *Id.* Defendants argue that "ramp" is a "variable term," such that the claims and specification must provide "at least some objective boundary for the claim." *Id.* (citing *Sonix Tech. Co. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1377-78 (Fed. Cir. 2017)).

Plaintiff replies that Defendants' argument about different states is attorney argument only and not the understanding of a person of ordinary skill, contrasted to Dr. Durham's statement, which Plaintiff argues is consistent with the language of claim 8. ECF 73 at 11. Plaintiff further replies that "gradually" appears nowhere in the claim, such that Defendants' citation to use of "gradually" with "ramp" in the specification is improper. *Id.* Plaintiff argues that *Sonix Tech.* is not relevant, because it related to whether the phrase "visually negligible" was indefinite when used to describe a graphical indicator, whereas in this case "ramp" "does not describe any aspect or feature of the claimed invention." *Id.* at 11-12. Plaintiff further argues that because the parties appear to agree that "ramp" is a verb, it is not a variable term or a term of degree. *Id.* at 12. Plaintiff further replies that the plain meaning of the term covers all instances where a motor speed of a fluid handling device is "ramped" by the claim system. *Id.*

The Court's Analysis

Claim 8 of the '078 Patent recites:

> 8. The method of claim 6, wherein the plurality of different states ramp up or ramp down a motor speed of a motor of the at least one of the fluid-handling devices.

Claim 4 of the '403 Patent recites:

> 4. The system of claim 1, wherein:
> the sequence of different target states that change over time are configured to ramp up or down a speed of the first pump.

Claim 2 of the ’504 Patent recites:

> 2. The system of claim 1, wherein: the sequence of different target states that change over time are configured to ramp up or down a speed of the first fluid-handling device.

The independent claims related to each of these claims recite operations or steps related to identifying or reaching different target states at different times. *See, e.g.*, ’078 Patent claim 1 at 16:21-24 (“determining a plurality of different target states of the at least one of the fluid-handling devices, the plurality of different states each corresponding to different times”); ’403 Patent claim 1 at 17:6-10 (“causing, with the server system, the first computer system disposed at the first fluid handling site to effectuate the command by changing the state of the first pump to a sequence of different target states that change over time”); ’504 Patent at 17:21-25 (“causing, with the server system, the first computer system disposed at the first fluid handling site to effectuate the command by changing the state of the first fluid-handling device to a sequence of different target states that change over time”). In each of the independent claims, the recited “different [target] states” that provide antecedent basis to the same terms in the relevant dependent claims are expressed in either instructions (’078 Patent 16:36-38) or the expression of a command (’403 Patent at 6-10; ’504 Patent at 17:21-25).

The shared specification provides several examples of various fluid-handling devices. *See, e.g.*, ’078 Patent at 5:40-52. It further provides examples of the types of state changes that may be controlled through their use, such as changing “speed, pressure, or flow-rate of a pump,” or starting or stopping flow by opening or closing a valve. *See, e.g.*, *id.* at 5:58-6:3. The specification also provides various examples of complicated or time-dependent state changes, such as multi-step state changes based on sensor feedback, oscillation between states, or single-direction state

changes such as "ramping up or down the speed of a pump or gradually opening or closing a valve." *See id.* at 6:4-21; 10:27-33; 11:33-37.

A skilled person, reading the claims in light of the specification, would be able to understand the scope of the claims with reasonable certainty and would not consider the term "ramp" to be a variable term of degree. As pointed out by Plaintiffs, the term "ramp" is used in the context of the claims as a verb, not an adjective to describe another feature. The claims and specification make it clear that a plurality of target states are determined over time. The specification identifies various time-dependent state changes that can be the result of such target states over time, including oscillation between states (high/low or on/off in sequence over time), gradually opening or closing a valve, or ramping up or down the speed of a pump. The use of the term "ramp up or down" in the context of the claim and specification is to contrast multi-directional target states over time, such as oscillation, with a single-directional[10] change over time (*i.e.*, a "ramp"). There is no question of degree, as zero state change over time would not constitute "up" or "down" as used consistently with "ramp" in the specification and claims. Similarly, a vertical state change over a horizontal time axis would be impossible in a real-world system and would further violate the independent claim limitations that the "different target states" either "change over time" ('403 Patent at 17:10-11; '504 Patent at 17:24-25) or are "each corresponding to different times" ('078 Patent at 16:23-24). Further, the claims do not use any language of degree such as "gradually" to define "ramp" that may be subject to such interpretation, despite such language appearing in the specification. *See, e.g.*, '078 Patent at 6:20 ("gradually ramping up or down the speed of a pump"). In the context of the specification and claims, in which a "plurality"

[10] This is not to be interpreted as meaning the change must be linear; when reading the specification and claims it is clear such changes can occur in a sequence of stepped state changes in the same direction (either up or down).

of different target states are determined over time, a skilled person would have no difficulty understanding the scope of the claims with reasonable certainty.

Defendants' arguments that it is unclear how a "state" can "ramp up or down a motor speed" and that the term "ramp" is applied to "states" and not "instructions" are both unfounded. *See* ECF 68 at 11. As discussed above, in the independent claims, the different target states over time are expressed as either instructions or the expression of a command. Further, in each of claim 4 of the '403 Patent and claim 2 of the '504 Patent, the claims recite "*the sequence of target states that change over time are configured to* ramp up or down a speed" of the first pump or fluid-handling device. *See* '403 Patent at claim 4; '504 Patent at claim 2 (emphasis added).

The parties do not identify any relevant information in the prosecution history, and nothing in the prosecution history appears to be contrary to the Court's understanding. Defendants have failed to prove indefiniteness by clear and convincing evidence. The Court therefore expressly rejects Defendants' indefiniteness argument. Based on the discussion above, no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79.

The Court accordingly concludes that **"ramp"** is not indefinite and should be construed according to its **plain meaning**.

I. Term #9: "facility-interface module or modules"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #9: "facility-interface module or modules" U.S. Patent No. 9,898,014, Cls. 1, 5, 8-11, 17, 21; and U.S. Patent No. 10,488,871, Cls. 18, 22, 25, 30, 32 Proposed by Defendants	Plain and ordinary meaning, or if determined to be a means-plus-function term: **Function:** Obtaining data from the sensors at the facilities and sending commands to the actuators at the facilities via the cellular network connections **Structure:** Site server, and equivalents (see, e.g., '014 Patent at 4:36-52)	Indefinite

ECF No. 76 at 5.

The Parties' Positions

Defendants argue that this term does not appear in the specification, and that a person of skill would have "no way of evaluating whether any specific hardware or software falls within the scope" of the terms. ECF 56 at 29.

Plaintiff responds that a skilled person "would understand a facility-interface module and how it interacts with the recited elements of the claim," and specifically in the context of the claim language and specification would understand it to be the described site server. ECF 65 at 21. Plaintiff further responds that the rebuttable presumption against applying § 112(f) is present due to the lack of "means" language, and that for "basic" computing functions, the computer itself is definite structure for performing the function and plain and ordinary meaning is appropriate. *Id.* To the extent the Court applies § 112(f), Plaintiff responds that the specification discloses sufficient structure. *Id.* Plaintiff argues the function of the term is "obtaining data from the sensors at the facilities and sending commands to the actuators at the facilities via the cellular network

connections," and corresponding structure is the site server found in the '014 Patent at 4:36-52, and equivalents. *Id.* at 21-22. Plaintiff identifies that the facility-interface module is further identified in claim 5, which depends from claim 1, as comprising "a site server distinct from the web server." *Id.* at 22; see '014 Patent at 16:38-41; 17:34-35.

Defendants reply that "module" is a nonce word that does not disclose structure and that § 112(f) applies. ECF 68 at 12. Defendants further reply that the term is not linked to any structure that performs "the many functions" of the identified module. *Id.* Defendants argue that the function "configured to obtain data from the sensors at the facilities and send commands to the actuators at the facilities via the network connections" is not clearly linked to disclosed structure in the specification. *Id.* Defendants argue that Plaintiff's identified specification citation does not discuss the site server interfacing with the "facility," but instead interacting with "devices" such as the command-center server and site master controllers. *Id.* at 13 (citing '014 Patent at 4:36-52). Defendants also argue that the specification section states elsewhere that the "site master controller 18" issues commands "to return a value sensed by sensor 56," not the "site server." *Id.* (citing '014 Patent at 7:3-7). Defendants further reply that Plaintiff's citation to claim 5 is unwarranted, because "comprising" is a term of art meaning "I claim at least what follows and potentially more," so the "facility-interface module or modules" as recited "must include more than just the site server." *Id.*

Plaintiff replies that Defendant has not overcome their burden to show that the term is governed by § 112(f). ECF 73 at 12. Plaintiff restates that the claimed "facility-interface module" performs basic data processing functions of "obtaining data" and "sending commands." *Id.* (citing Durham Decl. at ¶ 63). Plaintiff argues that "facility-interface" provides sufficient structure to a skilled person in context of the claim and specification. *Id.* at 12-13. Plaintiff alternatively argues that if the term is governed by § 112(f), there is sufficient structure. *Id.* at 13. Plaintiff disagrees

with Defendants' position that the specification must describe interfacing with the "facility" because the claimed function is "obtaining data from the sensors at the facilities and sending commands to the actuators at the facilities via the cellular network connections." *Id.* Plaintiff dispute Defendants' argument about "comprising" language, arguing that claim 5 does not include any requirement that the facility-interface module be more than a site server, rather "only that it be at least a site server that is distinct from a web server." *Id.*

The Court's Analysis

The parties dispute whether the term is subject to § 112(f) and whether it is indefinite. The term "facility-interface module or modules" appears in claims 1, 5, 8-11, 17, and 21 of the '014 Patent, and claims 18, 22, 25, 30, and 32 of the 871 Patent. The parties have made no distinction in arguments between patents and claims. Therefore, the Court will analyze exemplary claim 1 of the '014 Patent and claim 18 of the '871 Patent.

Claim 1 of the '014 Patent recites (emphasis added):

> 1. A hosted, web-based, remote industrial monitoring and control system for geographically distributed facilities in oil and gas fields, the system comprising:
> a computer-implemented datastore storing:
> a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities; and
> network addresses by which industrial monitoring or control equipment at the facilities is accessible via cellular network connections, the monitoring or control equipment including sensors or actuators;
> *a computer-implemented facility-interface module or modules configured to obtain data from the sensors at the facilities and send commands to the actuators at the facilities via the cellular network connections;* and
> a computer-implemented web-interface module or modules configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to

the accounts and to receive commands to control actuators from the user computing devices,

wherein the system is configured to receive, with the web-interface module or modules, a user command to actuate an actuator entered via a presented control interface, identify a network address in the datastore corresponding to a facility at which the actuator is located*, and send instructions with the facility-interface module or modules to the facility to actuate the actuator,* and

wherein:

the plurality of accounts include a first account, a second account, a third account, and a fourth account;

the first account corresponds to a first group of oil or gas facilities, users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of oil or gas facilities;

the second account corresponds to a second group of oil or gas facilities, the first group being different from the second group, users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil or gas facilities;

the third account corresponds to the first group of oil or gas facilities, users of the third account being authorized to view reports of data from fluid handling devices at the first group of oil or gas facilities; and

the fourth account corresponds to the second group of oil or gas facilities, users of the fourth account being authorized to view reports of data from fluid handling devices at the second group of oil or gas facilities.

Claim 1 of the ’014 Patent recites that a facility-interface module is “computer-implemented” and “configured to obtain data from the sensors at the facilities and send commands to the actuators at the facilities via the cellular network connections.” ’014 Patent at 16:38-41. The claimed system is further configured to “send instructions with the facility-interface module or modules to the facility to actuate the actuator.” *Id.* at 16:48-55. The term “facility-interface module or modules” does not recite “means” or “step” for performing a function, and therefore is rebuttably presumed to not invoke § 112(f). It does use the term “module,” which in and of itself does not connote structure, such that when used in replacement of “means” can invoke § 112(f).

However, the claim element is not written in means-plus-function formatting. Although an aspect of the claim language is functional in that the component is "configured to" communicate with facilities in a certain way, this claim element is not purely functional claiming. "[T]he mere fact that the disputed limitations incorporate functional language does not automatically convert the words into means for performing such functions." *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1008 (Fed. Cir. 2018). "The question whether [a term] invokes section 112, paragraph 6, depends on whether persons skilled in the art would understand the claim language to refer to structure, assessed in light of the presumption that flows from the drafter's choice not to employ the word 'means.'" *Samsung Elecs. Am., Inc. v. Prisua Eng'g Corp.*, 948 F.3d 1342, 1354 (Fed. Cir. 2020).

Having reviewed the claims, the Court finds that the phrase "facility-interface module or modules" as used in both patents is governed by 35 U.S.C. § 112(f). Neither Plaintiff nor its expert has argued that a "facility-interface module" is a commonly understood device or component such that the term is well-understood generally in the art to connote a specific structure. In this case, claim 1 recites the "facility-interface module or modules" purely in terms of its function, specifically "obtain[ing] data from the sensors at the facilities and send[ing] commands to the actuators at the facilities via the cellular network connections." '014 Patent at 16:38-41. This function does not recite an algorithmic structure sufficient to take it outside the realm of pure functional claiming. *Cf. Ergo Licensing, LLC v. CareFusion 303, Inc.*, 673 F.3d 1361, 1364 (Fed. Cir. 2012) ("Requiring disclosure of an algorithm properly defines the scope of the claim and prevents pure functional claiming.").

Turning to the corresponding structure, the shared specification identifies examples of relevant "facilities" as oil wells, as well as "petro-water disposal facilities, re-injection facilities,

and petroleum pumping stations." *Id.* at 1:31-39. Figure 1 identifies many of the structures and interactions described in the claims and specification:

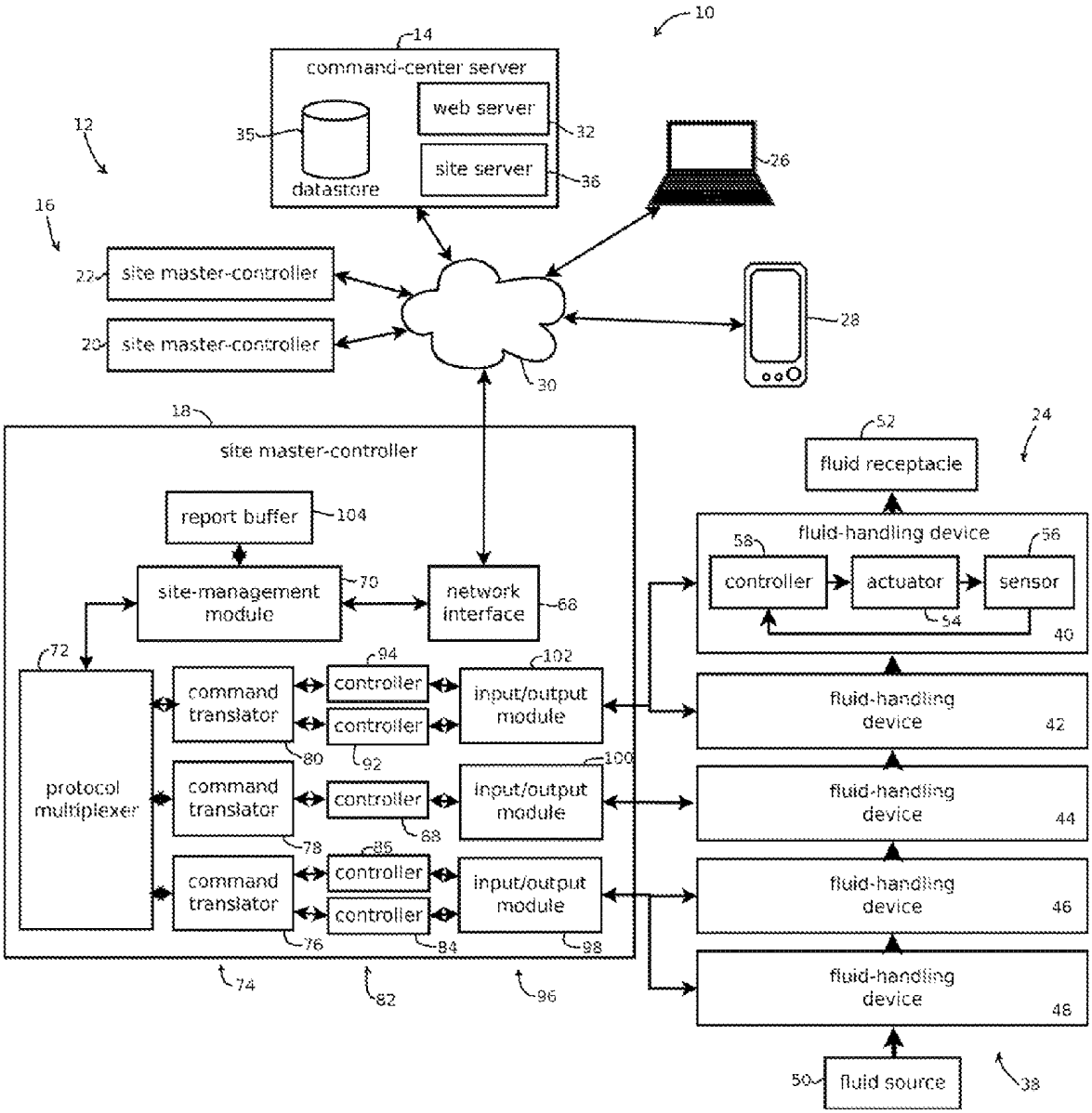


FIG. 1

'014 Patent at Fig. 1. The specification identifies relevant fluid-handling devices used at these facilities such as valves, pumps, process chambers such as oil/water separation tanks, process

filters, or level switches. *Id.* at 1:29-31; 5:53-57. It further describes in one embodiment that fluid-handling devices "are fluidly coupled to a fluid source 50 or a fluid receptacle 52, such that fluids (e.g., liquids or gases) can flow to, from, or through the respective fluid-handling device 38." *Id.* at 5:23-26. The specification identifies that such fluid-handling devices "may include an actuator, for instance an electric motor or a hydraulic drive, by which fluid flow or other parameters are manipulated, a sensor 56 by which process parameters are measured, or a local controller 58 by which power to the actuator 54 is modulated." *Id.* at 5:58-62. It further identifies a variety of types of sensors in fluid-handling devices, including "a temperature, viscosity, flowrate, fluid level, pressure, conductivity, or other parameter sensor." *Id.* at 5:62-65. The specification further recites that the fluid-handling devices "return sensor data to the site master-controller," and the site master-controller issues commands to the control actuators at the fluid-handling devices. *Id.* at 6:11-20; *see also id.* at 7:7:3-7, 60-63; *id.* at 10:67-11:5; *id.* at 12:25-34.

The specification states that the control system includes "a command center server 14 and site-master controllers 16 . . . that cooperate to facilitate remote control at a fluid-handling site 24." *Id.* at 3:3-9. "Each site-master controller 16 may be co-located with a corresponding fluid-handling site 24, and, in some embodiments, may include logic that implements remotely issued commands." *Id.* at 3:9-12. As shown in Figure 1, the site master-controller may contain a network interface 68, which the specification identifies "is operative to communicate with the command-center server 14 via . . . a cellular network, or the like." *Id.* at 8:14-17. The command-center server 14 may include "a web server 32, a data store 34, and a site server 36. The command-center server 14 may act as a central node through which any of a plurality of user devices . . . issue commands to any of a plurality [of] site-master controller 16." *Id.* at 3:32-38. The site server 36 is described as follows in the specification:

> *The illustrated site server 36 may be operative to interface between the command-center server 14 and the site master-controllers 16 by directing commands received via the web server 32 to the site master-controller 16 to which the command is addressed and receiving process data from the respective site master-controllers to be stored in the data store 34 or presented to the users via the web server 32.* In some embodiments, the site server 36 is operative to receive a command via the web server 32, identify an IP address of the site master-controller 16 to which the command is addressed, and send the command to the respective site master-controller 16, for example via an IP address of the command set center server (which may be the same as that of the web server 32 or different) and via a port of the command-center server 14 (which may be different from a port used for the web server 32, or some embodiments may use the same port).

Id. at 4:36-52 (emphasis added). As shown above, the site server 36 is identified as receiving process data such as sensor data from the site mater-controllers located at the facilities and sending commands to the actuators at the facilities via the site-master controller.

The Court finds that the corresponding structure is disclosed in Figure 1 at 36, the "site server," and equivalents, as described in the '014 Patent at 4:36-52. This is consistent with claim 5 of the '014 Patent, which claims that the facility-interface module or modules "comprises a site server distinct from the web server." '014 Patent at 17:34-35.

The Court rejects Defendants' arguments that the identified site server cannot be the claimed structure. Defendants argue that although the claim language recites the facility-interface module obtaining data from and sending commands to actuators at "the facilities," the cited specification only discloses the site server interfacing with "(1) the command-center server and (2) the site master controllers." ECF 68 at 13. As discussed above, the specification discloses that the site-master controllers may be located at fluid-handling sites 24, '014 Patent at 5:11-13, which a person of ordinary skill would understand to be the claimed facilities, as the specification further identifies that the fluid-handling sites are those with fluid-handling devices 14 that are the process

equipment used at the various facilities. *See, e.g.*, *id.* at Fig. 1; 1:23-33, 60-60-63. Defendants also argue that because claim 5 is a "comprising" term, such that the "facility-interface module or modules comprise a site server separate from the web server," that the identified structure "must include more than the site server." Nothing in the Court's understanding of "comprising" requires a claimed element including "comprising" to include more than the claimed elements. The Court therefore rejects Defendants' indefiniteness arguments.

An analysis of the claims of claim 18 of the '871 Patent results in the same conclusion. Claim 18 of the '871 Patent recites (emphasis added):

> 18. A method, comprising:
> storing, with one or more processors, records comprising:
> a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed fluid-handling facilities, the accounts associating different fluid-handling facilities with different entities; and
> addresses by which industrial monitoring or control equipment at the facilities is accessible via network connections, the monitoring or control equipment including sensors configured to measure fluid handled at respective fluid-handling facilities and actuators configured to manipulate fluid flow at respective fluid-handling facilities, at least some of the fluid-handling facilities including both a plurality of the sensors and a plurality of the actuators;
> obtaining, with one or more processors implementing a *facility-interface module or modules*, data from the sensors at the facilities and send commands to the actuators at the facilities via the network connections; and
> sending, with one or more processors implementing a user-interface module or modules, respective instructions to present respective control interfaces on respective user-computing devices logged in to respective ones of the accounts and to receive respective commands to control respective actuators from the respective user computing devices;
> receiving, with the user-interface module or modules, a user command to actuate an actuator entered via a presented control interface;
> identifying, with one or more processors, in response to the user command, an address in the datastore corresponding to a facility at which the actuator is located; and

sending, with one or more processors, instructions with the facility-interface module or modules to the facility to actuate the actuator, wherein:

the plurality of accounts include a first account, a second account, a third account, and a fourth account;

the first account corresponds to a first group of fluid-handling facilities, one or more users of the first account being authorized to send commands to remotely control fluid handling devices at the first group of fluid-handling facilities;

the second account corresponds to a second group of fluid-handling facilities, the first group being different from the second group, one or more users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of fluid-handling facilities;

the third account corresponds to the first group of fluid-handling facilities, one or more users of the of the third account being authorized to view reports of data from fluid handling devices at the first group of fluid-handling facilities; and

the fourth account corresponds to the second group of fluid-handling facilities, one or more users of the of the fourth account being authorized to view reports of data from fluid handling devices at the second group of fluid-handling facilities.

The term as used in claim 18 is subject to § 112(f) for the same reasons stated above with respect to claim 1 of the ’014 Patent. Although the claim is a system claim, and the term recites “with one or more processors implementing a facility-interface module or modules,” the claim element still recites purely functional language with the same function as in the ’014 Patent, with the exception that a “cellular” network is not specified. For this reason, the Court concludes that the corresponding structure for the term as used across both patents is “obtaining data from the sensors at the facilities and sending commands to the actuators at the facilities via the [cellular] network connections.”

The parties do not identify any relevant information in the prosecution history, and nothing in the prosecution history appears to be contrary to the Court’s understanding. Defendants have

failed to prove indefiniteness by clear and convincing evidence. The Court therefore construes **"facility-interface module or modules"** as subject to § 112(f), concludes that it is not indefinite, and construes the phrase as follows:

Function: Obtaining data from the sensors at the facilities and sending commands to the actuators at the facilities via the [cellular] network connections.

Corresponding Structure: Site server 36 in Figure 1 and further described at 4:36-52 of the '014 Patent, and equivalents thereof.

J. Term #10: "web-interface module or modules"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #10: "web-interface module or modules" U.S. Patent No. 9,898,014, Cls. 1, 5, 9, 10 Proposed by Defendants	Plain and ordinary meaning, or if determined to be a means-plus-function term: **Function:** Sending instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices **Structure:** Web server, and equivalents (see '014 Patent at 3:47-4:6)	Indefinite

ECF No. 76 at 6.

The Parties' Positions

Defendants argue that this term does not appear in the specification, and that a person of skill would have "no way of evaluating whether any specific hardware or software falls within the scope" of the terms. ECF 56 at 29. Defendants also argue that the phrase in claim 5 of the '014 Patent, "the web-interface module or modules comprises a web server" is indefinite because "the

specification describes web servers as being components of other servers but does not disclose web servers as components of any modules." *Id.* at 29-30.

Plaintiff responds that a skilled person would understand the term in the context of the claim language and specification to be the described web server. ECF 65 at 23 (citing Durham Decl. at ¶¶ 66-67; '014 Patent at 3:47-4:6). Plaintiff argues that because the term does not use "means," and recites "basic" computer-implemented functions, the computer provides definite structure and plain and ordinary meaning is appropriate. *Id.* Alternatively, if the Court invokes § 112(f), Plaintiff argues that the function of the term is "sending instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices" and the corresponding structure is the web server and equivalents, as described in the specification at 3:47-62. *Id.* at 23-24. Plaintiff further responds that claim 5, which depends from claim 1, identifies the web-interface module as the web server. *Id.* at 24.

Defendants reply that the relevant inquiry is what a person of skill "would understand is disclosed to perform the claimed function," not what "could be used to perform the claimed function." ECF 68 at 14 (citing *Aristocrat Techs.*, 512 F.3d at 1337; *Biomedino*, 490 F.3d at 953). Defendants further replay that the '014 Patent does not disclose any structure for "sending instructions to present control interfaces in web browsers," and further does not include any algorithm for performing the claimed function. *Id.* (citing *CXT Sys.*, 2019 U.S. Dist. LEXIS 151714, at *19).

Plaintiff replies that a claim is not indefinite just because a term does not appear in the specification. ECF 73 at 13 (citing *BASF Corp.*, 875 F.3d at 1366. Plaintiff further responds that

Defendants have not overcome their burden to prove applicability of § 112(f), and a person of skill would have understood the term meaning in light of the claim and specification. *Id.* at 13-14.

The Court's Analysis

The parties dispute whether the term is subject to § 112(f) and whether it is indefinite. The term "web-interface module or modules" appears in claims 1, 5, 9, and 10 of the '014 Patent. Claim 1 of the '014 Patent recites (emphasis added):

> 1. A hosted, web-based, remote industrial monitoring and control system for geographically distributed facilities in oil and gas fields, the system comprising:
> a computer-implemented datastore storing:
> a plurality of accounts, each account corresponding to an entity operating one or more geographically distributed oil or gas facilities, the accounts associating different oil or gas facilities with different entities; and
> network addresses by which industrial monitoring or control equipment at the facilities is accessible via cellular network connections, the monitoring or control equipment including sensors or actuators;
> a computer-implemented facility-interface module or modules configured to obtain data from the sensors at the facilities and send commands to the actuators at the facilities via the cellular network connections; and
> *a computer-implemented web-interface module or modules configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices,*
> wherein the system is configured to *receive, with the web-interface module or modules, a user command to actuate an actuator entered via a presented control interface*, identify a network address in the datastore corresponding to a facility at which the actuator is located, and send instructions with the facility-interface module or modules to the facility to actuate the actuator, and
> wherein:
> the plurality of accounts include a first account, a second account, a third account, and a fourth account;
> the first account corresponds to a first group of oil or gas facilities, users of the first account being authorized to send

> commands to remotely control fluid handling devices at the first group of oil or gas facilities;
>
> the second account corresponds to a second group of oil or gas facilities, the first group being different from the second group, users of the second account being authorized to send commands to remotely control fluid handling devices at the second group of oil or gas facilities;
>
> the third account corresponds to the first group of oil or gas facilities, users of the third account being authorized to view reports of data from fluid handling devices at the first group of oil or gas facilities; and
>
> the fourth account corresponds to the second group of oil or gas facilities, users of the fourth account being authorized to view reports of data from fluid handling devices at the second group of oil or gas facilities.

Claim 1 of the ’014 Patent recites that a web-interface module is “computer-implemented” and “configured to send instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices.” ’014 Patent at 16:42-47. The claimed system is further configured to “receive, with the web-interface module or modules, a user command to actuate an actuator entered via a presented control interface.” *Id.* at 16:48-51. The term “web-interface module or modules” does not recite “means” or “step” for performing a function, and therefore is rebuttably presumed to not invoke § 112(f). It does use the term “module,” which in and of itself does not connote structure, such that when used in replacement of “means” can invoke § 112(f). However, the claim element is not written in means-plus-function formatting. Although an aspect of the claim language is functional in that the component is “configured to” communicate with user computing devices in a certain way, this claim element is not purely functional claiming. “[T]he mere fact that the disputed limitations incorporate functional language does not automatically convert the words into means for performing such functions.” *Zeroclick*, 891 F.3d at 1008. “The question whether [a term] invokes section 112, paragraph 6, depends on whether

persons skilled in the art would understand the claim language to refer to structure, assessed in light of the presumption that flows from the drafter's choice not to employ the word 'means.'" *Samsung Elecs.*, 948 F.3d at 1354.

Having reviewed the claims, the Court finds that the phrase "web-interface module or modules" as used in both patents is governed by 35 U.S.C. § 112(f). Neither Plaintiff nor its expert has argued that a "web-interface module" is a commonly understood device or component such that the term is well-understood generally in the art to connote a specific structure. In this case, claim 1 recites the "web-interface module or modules" purely in terms of its function, specifically "send[ing] instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices." '014 Patent at 16:42-47. This function does not recite an algorithmic structure sufficient to take it outside the realm of pure functional claiming. *Cf. Ergo Licensing*, 673 F.3d at 1364 (Fed. Cir. 2012) ("Requiring disclosure of an algorithm properly defines the scope of the claim and prevents pure functional claiming.").

Turning to the corresponding structure, the shared specification identifies examples of relevant "facilities" as oil wells, "petro-water disposal facilities, re-injection facilities, and petroleum pumping stations." '014 Patent at 1:26-33. Figure 1 identifies many of the structures and interactions described in the claims and specification:

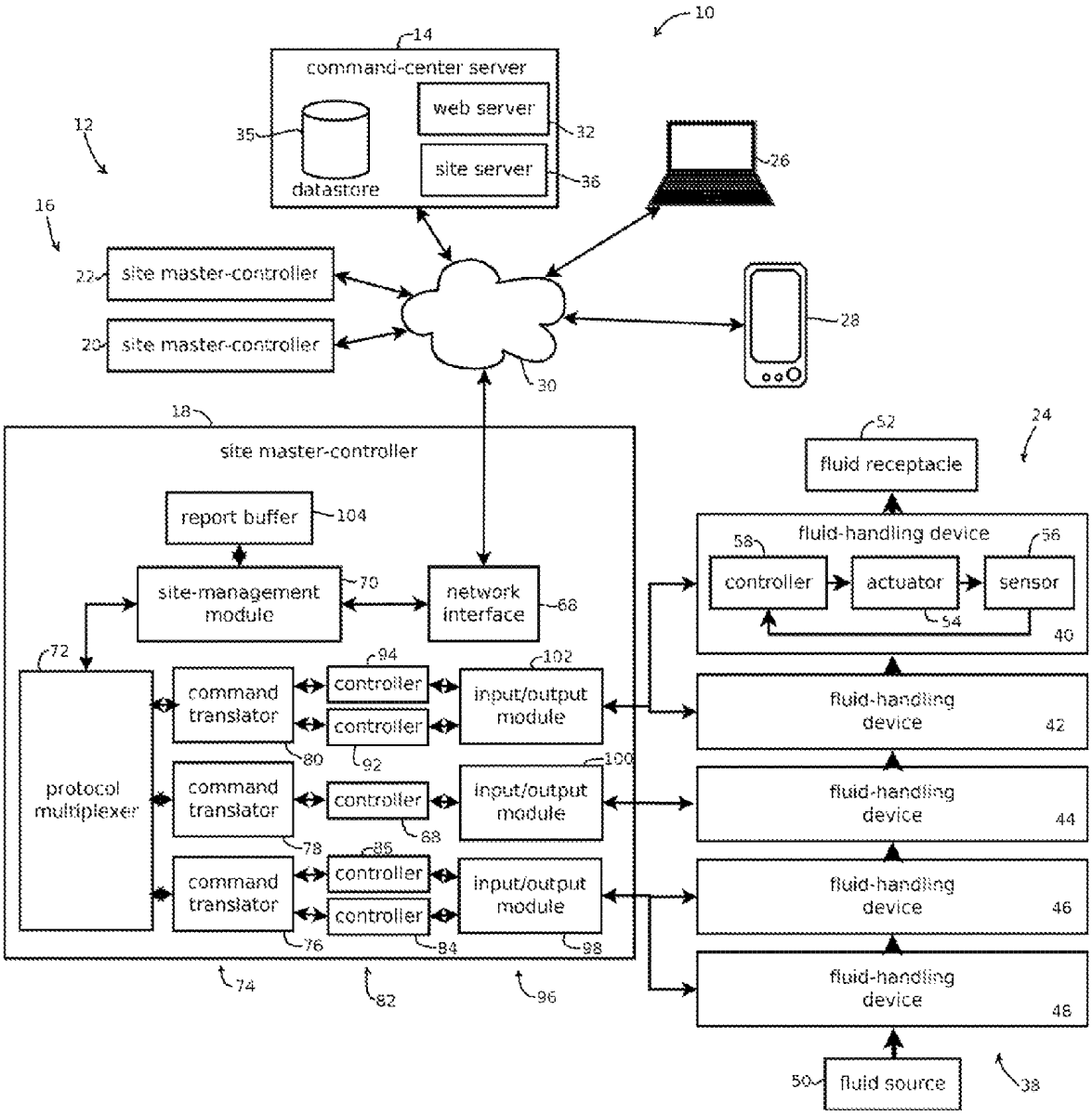


FIG. 1

'014 Patent at Fig. 1. The specification states that the control system includes "a command center server 14 and site-master controllers 16 . . . that cooperate to facilitate remote control at a fluid-handling site 24." *Id.* at 3:3-9. "Each site-master controller 16 may be co-located with a corresponding fluid-handling site 24, and, in some embodiments, may include logic that

implements remotely issued commands." *Id.* at 3:9-12. As shown in Figure 1, the site master-controller may contain a network interface 68, which the specification identifies "is operative to communicate with the command-center server 14 via . . . a cellular network, or the like." *Id.* at 8:14-17. The command-center server 14 may include "a web server 32, a data store 34, and a site server 36. The command-center server 14 may act as a central node through which any of a plurality of user devices, such as user devices 26 and 28 (e.g., laptops, tablets, desktop computers, smartphones, and the like), issue commands to any of a plurality [of] site-master controller 16, provided that such access is authorized." *Id.* at 3:32-39. The specification identifies that user access is controlled through user account access such as user names and passwords. *Id.* at 4:15-30. The command-center server "may be operative to present a command interface and receive commands via a web interface in a web browser on user devices 26 and 28." *Id.* at 3:22-25. The web server 36 is described as follows in the specification:

> *The illustrated web server 32 may be operative to send instructions to present a control interface on the user devices 26 and 28, for example in a web browser on an operative system executed by processors and stored by memory of the user devices 26 or 28. The web server 32 may be operative to receive a request for such an interface from one of the user devices 26 or 28, send instructions (for example HTML JavaScript, and cascading stylesheets) to the user devices 26 that when rendered in a browser of the user devices 26 or 28, presents the control interface.* The *control interface* may include buttons, text-input fields, and the like, that when interacted with by a user (e.g., touching, clicking, keying in text, and the like) generated events handled by the control interface and which *cause corresponding commands to be sent from the user devices 26 or 28 to the command-center server 14*.

Id. at 3:47-62 (emphasis added). The specification identifies that the site server is "operative to receive a command via the web server." *Id.* at 4:42-44. Consistent with these disclosures, the specification further identifies in relation to Figure 2 a process of receiving "a command to change a state of a fluid-handling device to a target state" from a site server, which may have "received

the command from a remote user device via a web browser of the user device." *Id.* at 11:37-44. As shown above, the web server 32 is identified as performing the recited functions of the claimed "web-interface module or modules."

The Court finds that the corresponding structure is disclosed in Figure 1 at 32, the "web server," and equivalents, as described in the '014 Patent at 3:47-62. This is consistent with claim 5 of the '014 Patent, which claims that the web-interface module or modules "comprises a web server." '014 Patent at 17:32-33. The parties do not identify any relevant information in the prosecution history, and nothing in the prosecution history appears to be contrary to the Court's understanding. Defendants have failed to prove indefiniteness by clear and convincing evidence. The Court therefore rejects Defendants' indefiniteness arguments.

The Court therefore construes **"web-interface module or modules"** as subject to § 112(f), concludes that it is not indefinite, and construes the phrase as follows:

Function: Sending instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices.

Corresponding Structure: Web server 32 in Figure 1 of the '014 Patent and further described at 3:47-62, and equivalents thereof.

K. Term #11: "storing, with one or more processors, records"

Term	**Plaintiff's Proposed Construction**	**Defendants' Proposed Construction**
Term #11: "storing, with one or more processors, records" U.S. Patent No. 10,488,871, Cl. 18 Proposed by Defendants	Plain and ordinary meaning	Indefinite

ECF No. 76 at 6.

The Parties' Positions

Defendants argue that the shared specification identifies that "processors are used to execute instructions, while memory is for storing." ECF 56 at 35 (citing '871 Patent at 3:55-59, 12:59-13:26). Defendants further argue that the claim is indefinite because the specification does not disclose a process storing records or how one skilled in the art could "determine whether a given processor stores or does not store records." *Id.*

Plaintiff responds that, within the context of the specification, one of skill would understand "that the plain meaning of the claim requires the processor work in conjunction with memory." ECF 65 at 26 (citing Durham Decl. at ¶ 74; '871 Patent at 2:4-6 ("the system including . . . memory; and one or more processors communicatively coupled to the input/output module, the network interface, and the memory")). Plaintiff further responds that a person of skill would understand that a "processor, in conjunction with memory, is capable of storing data." *Id.* at 26-27 (citing '871 Patent at 13:8-10 ("A processor may receive instructions and data from a memory")). Plaintiff argues that a skilled person "would understand that storing *with* a processor does not mean storing *in* a processor, but that the processor is directing the storing." *Id.* at 27. Therefore, Plaintiff responds that the term is not indefinite and should be construed according to its plain meaning.

Defendants reply that Plaintiff's citation was to an embodiment and cited components "may be present" "in some aspects" in the system, and that the cited language does not disclose that processors work in conjunction with memory to store records. ECF 68 at 15. Defendants further reply that citation to Dr. Durham's declaration cannot overcome the alleged incomplete disclosure.

Plaintiff replies that Defendants' critiques of Dr. Durham's declaration are insufficient and that the Court can rely on Dr. Durham's statements. ECF 73 at 14-15. Plaintiff further responds that the specification teaches that a "processor may receive instructions and data from a memory." *Id.* (quoting '871 Patent at 13:8-10; citing *id.* at 2:6-8).

The Court's Analysis

Claim 1 begins by reciting, "A method, comprising: storing, with one or more processors, records comprising:" '871 Patent at 19:4-5. As identified by Plaintiff, the plain language of the claim states that records are stored "with" one or more processors. *Id.*; *see* ECF 65 at 27. The claim language does not require storage of such records "in," "within" or "on" said one or more processors. Therefore, the plain language of the claim requires that a processor be involved in the method of storing said records. This language is consistent with the disclosures in the specification, which discloses a processor involved in the process of storing records and other data, and that such records and other data is stored in memory. *See, e.g.*, '871 Patent at Fig. 2 ("store the received sensor data in local memory"); *id.* at 2:4-8 ("one or more processors communicatively coupled to the input/output module, the network interface, and the memory, wherein the memory stores instructions that when executed by the processors cause the processors to effectuate steps"); *id.* at 3:57-59 ("for example in a web browser on an operating system executed by processors and stored in memory of the user devices"); *id.* at 4:39-44 ("data store 34 may encode such arrangements in a variety of formats, including . . . or other information encoded in a tangible, non-transitory, machine-readable medium, such as a hard drive or random access memory"); *id.* at 6:66 ("addresses may be stored in memory"); *id.* at 9:5-7 ("the protocol multiplexer 72 may store in memory records for communicating with the fluid-handling devices 38"); *id.* at 12:32-35 ("In some embodiments, the received sensor data is stored in local memory, as illustrated by block 116. For

example, the received sensor data may be stored in the above-described report buffer 104."); *id.* at 13:8-10 ("A processor may receive instructions and data from a memory (e.g., system memory 1020)."); *id.* at 13:53-54 ("System memory 1020 may be configured to store program instructions 1100 or data 1110."); *id.* at 14:39-43 ("I/O interface 1050 may perform protocol, timing, or other data transformations to convert data signals from one component (e.g., system memory 1020) into a format suitable for use by another component (e.g., processors 1010a-1010n)."). Defendants fail to identify any examples in the specification or file history that suggest storage of records within a processor, or any other teaching in the specification that would cause a person of skill to lack reasonable certainty as to the scope of this claim.

The Court therefore expressly rejects Defendants' indefiniteness argument. Based on the discussion above, no further construction is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79.

The Court accordingly concludes that the term **"storing, with one or more processors, records"** is not indefinite and should be construed according to its **plain meaning.**

L. Term #12: "steps for ensuring at least some data is not lost"

Term	**Plaintiff's Proposed Construction**	**Defendants' Proposed Construction**
Term #12: "steps for ensuring at least some data is not lost" U.S. Patent No. 10,488,871, Cl. 31 Proposed by Defendants	**Function:** Ensuring at least some data is not lost **Structure:** The site master-controller and associated report buffer, and equivalents (*see* '871 Patent at 11:9-24)	Indefinite

ECF No. 76 at 7.

The Parties' Positions

Defendants argue that the term is indefinite because the specification does not specify what steps are "for ensuring" that at least some data is not lost, or disclose an algorithm for how the steps can be achieved. ECF 56 at 24-25. Defendants also argue that the specification does not link the site master-controller and associated report buffer to the claimed steps or describe "how those structures ensure that data is not lost." *Id.* at 25.

Plaintiff responds that the specification provides "an example of steps for ensuring some data is not lost in the form of the site master-controller in conjunction with the buffer." ECF 65 at 27 (citing Durham Decl. at ¶ 76; '871 Patent at 11:14-15). Plaintiff cites to the specification for support that the identified structure is linked to the function. *Id.* at 28 (citing '871 Patent at 11:9-24). Plaintiff argues a person of skill would understand "that the site master-controller receives site data and stores said data temporarily in the report buffer to facilitate the site master-controller receiving the data," and that the buffer "acts as a safeguard against temporary loss of network access, to ensure that data in the buffers is not lost." *Id.* (citing Durham Decl. at ¶¶ 75-78).

Defendants reply that Plaintiff's citation to the specification at 11:14-15 states that "steps are taken such that buffered data is not lost," but that the only disclosure cited is to "some embodiments" in which the site master controller retrieves and buffers such data. ECF 68 at 16 (citing '871 Patent at 11:9-15). Defendants further reply that Dr. Durham "fails to explain how or what the master site controller and report buffer do to ensure that data is not lost." *Id.* Defendants argue that the proposed construction "eliminates the 'steps for' language entirely, thus materially altering claim scope." *Id.*

Plaintiff replies that a person of ordinary skill "would understand these steps perform the claimed function and the term 'buffer' as it relates to storing data," and that the proposed

construction does not eliminate the 'steps for' language, but rather describes them "in enough detail to have been understood by a POSITA." ECF 73 at 15.

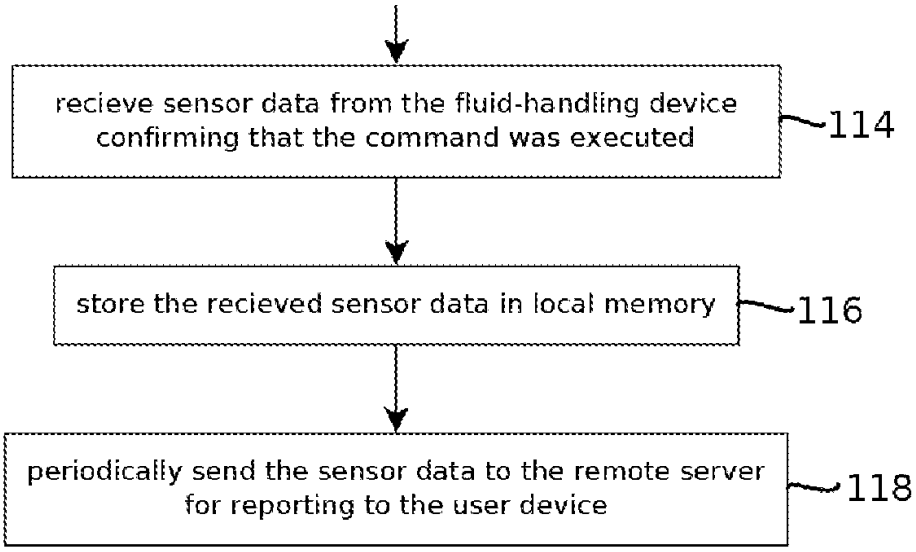
The Court's Analysis

Claim 31 of the '871 Patent recites:

> 31. The method of claim 28, comprising:
> *steps for ensuring at least some data is not lost* if network access ceases intermittently.

'871 Patent at 22:1-3 (emphasis added). Both parties assert that this term is subject to 35 U.S.C. by § 112(f), and the Court agrees. The relevant limitation is drafted in step-plus-function form, wherein the relevant function is "ensuring at least some data is not lost," without further guidance on what acts are required to perform such steps. The further phrase "if network access ceases intermittently" provides a condition under which data may be lost, rather than identifying acts for such steps.

Turning to the specification, it identifies that "the site master-controller 18, in some embodiments, is operative *to retrieve sensor data, alarms, and other site data, and buffer such data in the report buffer 104, before the data is periodically returned to the command-center server 14*, *such that buffered data is not lost if network access ceases intermittently*." '871 Patent at 11:9-15 (emphasis added). The recited acts corresponding to the function of this term—retrieving sensor data, alarms, and other site data, and buffer such data in the report buffer before the data is periodically returned—are shown in the specification in blocks 114, 116, and 118 of process 104 in Figure 2 and further described at 12:18-44 in relation to this figure. Figure 2 discloses the following in relevant part:



’871 Patent, Fig. 2. The specification describes these acts as follows:

> In some embodiments, the process 104 includes receiving sensor data from the fluid-handling device confirming that the command was executed, as illustrated by block 114. As with the other features described herein, not all embodiments include this step. Using this data, some embodiments may exercise feedback control or may retrieve sensor measurements following the execution of a command for reporting to the user device. In some cases, the sensor data is retrieved regardless of whether a command was issued, for example periodically to monitor the state of the fluid-handling device. In one example, the fluid-handling device is an oil/water separation tank, and a set point of a pump is adjusted to change a fluid level in the tank, e.g., a level at which oil meets water or a level of the oil.
>
> In some embodiments, the received sensor data is stored in local memory, as illustrated by block 116. For example, the received sensor data may be stored in the above-described report buffer 104.
>
> In some embodiments, the process 104 further includes periodically sending the sensor data to the remote server for reporting to the user device, as illustrated by block 118. Periodically, data from the report buffer may be transmitted to the above-described command-center server 14 for compilation of reports requested by user devices 26 to 28. Similarly, alarms or other log data issued by fluid-handling devices may also be retrieved, stored, and transmitted to the command-center server 14 for reporting.

Id. at 12:18-44. The Court identified these disclosures in its preliminary constructions to both parties in advance of the *Markman* hearing. Although Defendants argued that Plaintiff's identified structures were insufficient disclosure under § 112(f), Defendants made no argument that the acts[11] identified by the Court failed to provide sufficient disclosure. As such, Defendants have failed to prove indefiniteness by clear and convincing evidence. The parties do not identify any relevant information in the prosecution history, and nothing in the prosecution history appears to be contrary to the Court's understanding.

The Court therefore construes **"steps for ensuring at least some data is not lost"** as subject to § 112(f), concludes that it is not indefinite, and construes the phrase as follows:

Function: Ensuring at least some data is not lost.

Corresponding Acts: Acts disclosed in the '871 Patent in blocks 114, 116, and 118 of process 104 in Figure 2 and further described at 12:18-44, and equivalents thereof.

[11] Although the Court initially identified these disclosures in terms of "algorithms" rather than "acts," as pointed out by Defendants during the hearing, *Markman* Hr'g Tr. 50:16-51:22 Jan. 26, 2024, Defendants nonetheless had the opportunity to address whether the identified specification citations provided sufficient disclosure under § 112(f) and failed to do so.

M. Term #13: "steps for translating commands" / "steps for translating a command"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #13: "steps for translating a command" U.S. Patent No. 10,488,871, Cl. 32; "steps for translating commands" U.S. Patent No. 11,294,403, Cl. 10; and U.S. Patent No. 11,726,504, Cl. 8 Proposed by Defendants	**Function:** Translating commands **Structure:** Command translator, and equivalents (*see* '403 Patent at 9:39-51)	Indefinite

ECF No. 76 at 7.

The Parties' Positions

Defendants argue that the specification does not specify what steps are "for translating" or include an algorithm for how such steps are performed. ECF 56 at 25-26. Defendants further argue that the use of a "command translator" to "translate commands" is similar to the use of a "controller" to "control" and therefore does not inform a skilled person of the scope of invention. *Id.* at 26 (citing *Biomedino*, 490 F.3d at 951-52).

Plaintiff responds that the specification provides that the recited function is performed by the command translator, and the structure is linked to the function of translating commands. ECF 65 at 29 (citing '403 Patent at 9:39-51). Plaintiff further responds that the "controller" of *Biomedino* was "generic," while the claimed "command translator" of the asserted patents "has a clear structure defined in the specification. *Id.* Plaintiff argues a skilled person would understand that commands "would be translated differently based on the specific protocol of the corresponding

value or other equipment on-site for which the command was intended," that the command translator may "look up translated commands via a look-up table, or convert high level commands such as a command to dislodge a stuck valve into a sequence of on/off signals carried by voltage level." *Id.* at 29-30 (citing '403 Patent at 9:39-62; *id.* at 10:24-30; Durham Decl. at ¶¶ 79-82).

Defendants reply that Plaintiff's citation to the specification stating that "command translators 74 may be operative to translate" does not disclose how translating is performed, making the term indefinite, and that Plaintiff's proposed construction eliminates the "steps for" language, materially altering claim scope. ECF 68 at 16-17 (citing '403 Patent at 9:39-51).

Plaintiff replies that the specification "provides that commands may be translated differently based on the protocol of the fluid handling device ('403 Patent at 9:39-51), and that the command translator may use a look-up table or other methods to convert high level commands into ones that may be understood by the fluid handling devices." ECF 73 at 15 (citing '403 Patent at 9:52-62, 10:24-30; Durham Decl. at ¶ 81).

The Court's Analysis

Claim 10 of the '403 Patent depends from claim 9, which further depends from claim 1. Claims 9 and 10 recite:

> 9. The system of claim 1, wherein the first computer system is configured to translate a plurality of commands from the server system, including the command, from an input format to a plurality of different formats and protocols configured to effectuate changes in states of a plurality of different fluid-handling devices at the first fluid-handling site, the different fluid-handling devices including the first pump or the first valve.
>
> 10. The system of claim 9, wherein translating the plurality of commands comprises *steps for translating commands*.

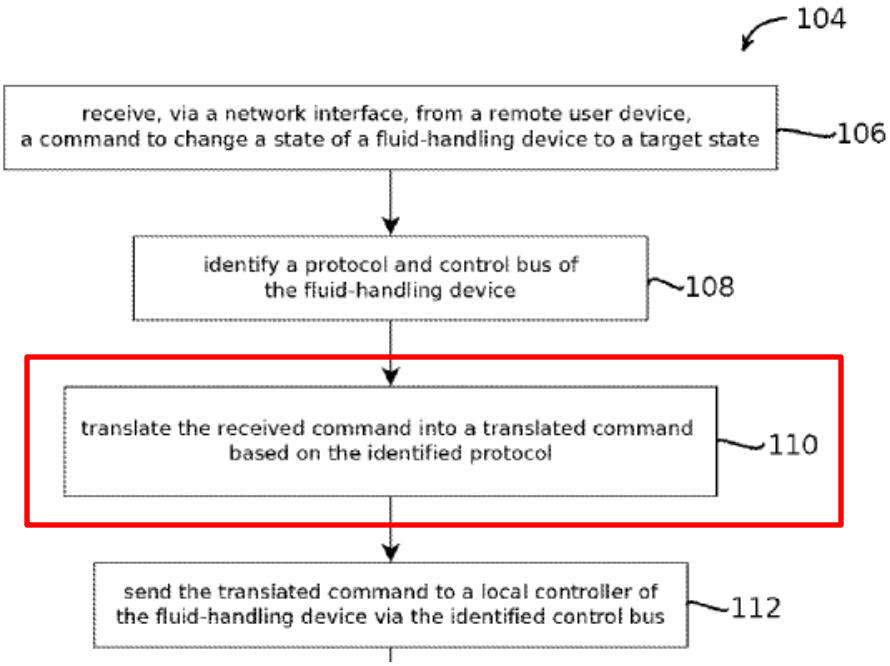
'403 Patent at 17:49-59 (emphasis added). Claim 8 of the '504 Patent similarly depends from claim 7, which further depends from claim 1. Claims 7 and 8 recite:

> 7. The system of claim 1, wherein the first computer system is configured to translate a plurality of commands from the server system, including the command, from an input format to a plurality of different formats and protocols configured to effectuate changes in states of a plurality of different fluid-handling devices at the first fluid handling site.
>
> 8. The system of claim 7, wherein translating the plurality of commands comprises *steps for translating commands*.

'504 Patent at 17:51-59 (emphasis added).

Both parties assert that this term is subject to 35 U.S.C. by § 112(f), and the Court agrees. The relevant limitation is drafted in step-plus-function form, wherein the relevant function is "translating [a] command[s]," without further guidance on what acts are required to perform such steps.

As described *supra* in relation to construction of the Term #2 "translating," the shared specification consistently describes the function of translating commands as being a change from one protocol or format to another. This is consistent with the language of '403 Patent claim 9 and '504 Patent claim 7, from which the identified claims depend. The specification identifies several examples of protocols, such as "the modbus RTU protocol," *id.* at 9:33, a "binary or analog voltage or current signal conveyed via a data acquisition board," *id.* at 9:35-37, "the Ethernet protocol," *id.* at 9:37-38, and command formats such as "command codes, on-off signals, application-program interfaces, and the like," *id.* at 8:18-19. The specification illustrates the step of translating commands in block 110 of process figure 104 in Figure 2, as further described in the '403 Patent at 12:8-12.



'403 Patent, Fig. 2 (emphasis added). The specification states that "the process 104 includes translating the received command into a translated command based on the identified protocol, as illustrated by block 110." *Id.* at 12:8-10. It further states, "Examples of such translation are described above with reference to the command translators 74." *Id.* at 12:11-12.

The specification further identifies several acts for translating commands, including examples of such acts, as shown below.

> The command translators 74 may be operative to translate a received command from an input format to a format configured to effectuate changes in the fluid-handling devices 38. For instance, a generic command to open a valve may be sent from the control-center server 14, and that command may be translated to differently depending on the specific protocol used to communicate with the corresponding valve at a given site, with different sites potentially employing different protocols for the task. Translating commands may abstract the details of the site-specific implementations away from those implementing the command-center server 14, facilitating relatively rapid deployment of new features or sites.
>
> In one example of translation, the command translator 80 may receive a command to increase a pump speed, and the command

> translator may determine a corresponding command via calculation or look-up table, such as a modbus function code and associated data, that when conveyed via the control bus 66 causes a corresponding fluid-handling device 40 or 42 to change state. In some embodiments, prior to execution, the command is checked for validity, to ensure the current conditions of the system warrant that the commanded action occur to preventing harm to the fluid-handling devices.
>
> For example, some embodiments may store in memory accessible to the command translator 80 system constraints describing acceptable patterns of input and output parameters. The system constraints may be selected to prevent damage to the system, e.g., a maximum speed for a pump, a maximum or minimum liquid height for a tank, a maximum or minimum fluid pressure, a maximum or minimum flow rate, an impermissible pattern of open valves that would leak oil outside of the system, etc. A command may be compared against these constraints to determine whether the command would cause the system to violate one of the constraints. In response to determining that the command would violate a constraint, the command may be rejected, an override confirmation may be requested from the operator, or the command may be executed to the extent permitted by the constraints, for instance.
>
> Some embodiments may execute the translated commands in different modes. For instance, in an automatic mode, the command translator 80 may select set points to keep the system within the above-described constraints, execute a process recipe in which a collection of set points are targeted, or to target other output set points given the above described constraints. In another example, the system may operate in a mixed automatic mode in which the user selects which devices are manually controlled while other devices are automatically controlled. In a third example, a manual mode, each of the devices may be controlled manually.
>
> In another example, the command translator 78 may be operative to determine whether a command corresponds to a particular voltage or current on an individual instance of the control bus 64. For example, a command to dislodge a stuck valve may be translated by the command translator 78 into a sequence of on and off signals conveyed via a high and low voltage on an individual wire corresponding to bus 64.

'403 Patent at 9:39-10:30. Although the acts for translating commands may differ depending on the functions or protocols involved, the specification provides sufficient detail of corresponding

acts, such as the identified examples, to meet the requirements of § 112(f). Again, Defendants made no argument in the *Markman* hearing that the acts identified by the Court failed to provide sufficient disclosure. As such, Defendants have failed to prove indefiniteness by clear and convincing evidence. The parties do not identify any relevant information in the prosecution history, and nothing in the prosecution history appears to be contrary to the Court's understanding.

The Court accordingly construes **"steps for translating commands" / "steps for translating a command"** as subject to § 112(f), concludes that it is not indefinite, and construes the phrase as follows:

Function: Translating [a] command[s].

Corresponding Structure: Acts disclosed in the '403 Patent in block 110 of process 104 in Figure 2 and further described at 9:39-10:30 and 12:8-12, and equivalents thereof.

N. Term #14: "steps for loosening a stuck valve"

Term	**Plaintiff's Proposed Construction**	**Defendants' Proposed Construction**
Term #14: "steps for loosening a stuck valve" U.S. Patent No. 10,488,871, Cl. 33 Proposed by Defendants	**Function:** Loosening a stuck valve **Structure:** Site master-controller and equivalents (*see* '871 Patent at 6:26-29**)**	Indefinite

ECF No. 76 at 7.

The Parties' Positions

Defendants argue that the specification does not specify what steps are "for loosening" or include an algorithm for how the loosening steps are performed, and that Plaintiff identified a general purpose computer that fails to clarify claim scope. ECF 56 at 25 (citing *Aristocrat Techs.*, 521 F.3d at 1331). Defendants also argue that there is "no link" between the site master-controller

and the claimed function in the specification, much less a clear link. *Id.* (citing *Williamson*, 792 F.3d at 1352).

Plaintiff responds that the recited function is performed by the site master-controller, which is linked to the cited function. ECF 65 at 30 (citing '871 Patent at 6:26-29). Plaintiff further responds that a skilled person would understand that the site master-controller loosens a stuck valve "by issuing a series of commands causing the appropriate local controller to oscillate the stuck valve, working it loose." *Id.* at 30-31 (citing Durham Decl. at ¶¶ 83-84; '871 Patent at 10:21-23, 10:52-53). Plaintiff argues that the "standard microprocessor" in *Aristocrat Techs.* Is distinguishable from the cited master-controller, which Plaintiff argues is "not a general-purpose computer, but instead a special-purpose SCADA device designed to perform the various functions described in the specification, including loosening a stuck valve." *Id.* at 31 (citing Durham Decl. at ¶¶ 83-84; *Nero Corp. v. Boston Sci. Corp.*, 955 F.3d 35, 43 (Fed. Cir. 2020)).

The Court's Analysis

Claim 33 of the '871 Patent recites:

> 33. The method of claim 28, comprising:
> steps for loosening a stuck valve.

Both parties assert that this term is subject to 35 U.S.C. by § 112(f), and the Court agrees. The relevant limitation is drafted in step-plus-function form, wherein the relevant function is "loosening a stuck valve," without further guidance on what acts are required to perform such steps.

Looking to the specification, it states the following with respect to steps for loosening a stuck valve in reference to Figure 1:

> In some cases, the local controllers 58 may have relatively limited processing power, such that more complicated changes in state are executed responsive to multiple commands to the respective fluid-

> handling device 38. For example, a fluid-handling device 38 with feed-forward control may receive a command to adjust to a target setpoint, return sensor data to the site master-controller 18, and received a subsequent command to adjust further based on a determination made by the site master-controller 18 based on the sensor data. In another example, *a stuck-valve may be loosened by a series of commands issued from the site master-controller 18 causing a local controller 58 to oscillate between states, working the stuck-valve loose*. Similarly, shocks to up-stream or down-stream fluid-handling devices may be mitigated by a series of commands gradually changing the state of a given fluid-handling device, for instance gradually ramping up or down the speed of a pump or gradually opening or closing a valve. In some embodiments, an action that affects the system, yet originates from outside the system, may use logic from a controller in the local system, such as a relatively drastic or rapid reduction in a specific tank level, which may indicate that a leak in a tank may exists, and the outside logic may provide which tank is experiencing the leak.

'871 Patent at 6:17-40 (emphasis added). Contrary to Defendants' assertion, the specification provides guidance on what steps to take to loosen a stuck valve, namely, by using "a series of commands issued from the site master-controller 18 causing a local controller 58 to oscillate between states, working the stuck-valve loose." *Id.* at 6:26-29; see also *id.* at 10:48-56 (reciting "a command to oscillate the position of a valve to dislodge a stuck valve"). Despite both the Plaintiff and Court identifying the specification citations above as sufficient disclosure under § 112(f), Defendants rested on their opening brief and made no responsive arguments to this disclosure. ECF 68 at 17 n.11. As Defendants have failed to provide any analysis or argument as to why such disclosure is insufficient to meet the definiteness requirement, much less by a clear and convincing evidence standard, the Court rejects Defendants' indefiniteness arguments. The parties do not identify any relevant information in the prosecution history, and nothing in the prosecution history appears to be contrary to the Court's understanding.

The Court accordingly construes **"steps for loosening a stuck valve"** as subject to § 112(f), concludes that it is not indefinite, and construes the phrase as follows:

Function: Loosening a stuck valve.

Corresponding Structure: Acts disclosed in the '871 Patent at 6:26-29 and 10:52-53, and equivalents thereof.

O. Term #15: "steps for mitigating shocks to up-stream or down-stream fluid handling devices"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #15: "steps for mitigating shocks to up-stream or down-stream fluid handling devices" U.S. Patent No. 10,488,871, Cl. 34; U.S. Patent No. 11,294,403, Cl. 5; and U.S. Patent No. 11,726,504, Cl. 3 Proposed by Defendants	**Function:** Mitigating shocks to up-stream or down-stream fluid handling devices **Structure:** Site master-controller and equivalents (see '403 Patent at 6:35-40)	Indefinite

ECF No. 76 at 8.

The Parties' Positions

Defendants argue that the term is indefinite because the specification does not specify what steps are for mitigating shocks, or disclose an algorithm for how shocks are mitigated. ECF 56 at 27 (citing *Aristocrat Techs.*, 521 F.3d at 1331).

Plaintiff responds that a person of ordinary skill "would understand how to perform these steps from the specification," such that the term is not indefinite. ECF 65 at 32. Plaintiff further responds that the function is performed by the site master-controller as described in the '403 Patent specification at 6:35-50. *Id.* Plaintiff argues that a person of skill would understand that the site master-controller mitigates shocks to up-stream or down-stream devices by issuing "a series of

commands gradually changing states of a fluid handling device, rather than, for example, rapidly oscillating states." *Id.* (citing Durham Decl. at ¶ 86). Plaintiff further argues that the term is not a "black box" because a skilled person would understand the site master-controller to be a "special purpose SCADA device that could mitigate shocks to up-stream and down-stream devices by issuing a special series of commands to the local controllers of the relevant fluid handling devices." *Id.*

The Court's Analysis

There are three dependent claims at issue across three patents. Claim 34 of the '871 Patent recites:

> 34. The method of claim 28, comprising:
> steps for mitigating shocks to up-stream or down-stream fluid-handling devices.

Claim 5 of the '403 Patent recites:

> 5. The system of claim 1, wherein:
> the sequence of different target states that change over time are determined with steps for mitigating shocks to up-stream or down-stream fluid-handling devices relative to the first pump.

Claim 3 of the '504 Patent recites:

> 3. The system of claim 1, wherein: the sequence of different target states that change over time are determined with steps for mitigating shocks to up-stream or down-stream fluid-handling devices relative to the first fluid-handling device.

Both parties assert that this term as found in all three claims is subject to 35 U.S.C. by § 112(f), and the Court agrees. The relevant limitation is drafted in step-plus-function form, wherein the relevant function is "mitigating shocks to up-stream or down-stream fluid handling devices," without further guidance on what acts are required to perform such steps.

In both claim 3 of the ’504 Patent and claim 5 of the ’403 Patent, the sequence of different target states that change over time relate to their respective independent claim elements of “causing, with the server system, the first computer system disposed at the first fluid handling site to effectuate the command by changing the state of the first [pump/fluid-handling device] to a sequence of different target states that change over time.” ’504 Patent at 17:21-25; ’403 Patent at 17:6-10. Looking to the specification, it states the following with respect to steps for mitigating shocks to up-stream or down-stream fluid-handling devices in reference to Figure 1:

> In some cases, the local controllers 58 may have relatively limited processing power, such that more complicated changes in state are executed responsive to multiple commands to the respective fluid-handling device 38. For example, a fluid-handling device 38 with feed-forward control may receive a command to adjust to a target setpoint, return sensor data to the site master-controller 18, and received a subsequent command to adjust further based on a determination made by the site master-controller 18 based on the sensor data. In another example, a stuck-valve may be loosened by a series of commands issued from the site master-controller 18 causing a local controller 58 to oscillate between states, working the stuck-valve loose. Similarly, *shocks to up-stream or down-stream fluid-handling devices may be mitigated by a series of commands gradually changing the state of a given fluid-handling device, for instance gradually ramping up or down the speed of a pump or gradually opening or closing a valve.* In some embodiments, an action that affects the system, yet originates from outside the system, may use logic from a controller in the local system, such as a relatively drastic or rapid reduction in a specific tank level, which may indicate that a leak in a tank may exists, and the outside logic may provide which tank is experiencing the leak.

’403 Patent at 6:23-46; see also *id.* at 10:55-58 (reciting “chang[ing] the set point over time in accordance with the receive command, for example a command to gradually ramp up a motor speed, a command to gradually open a valve”). Contrary to Defendants’ assertion, the specification provides guidance on what steps to take to mitigate shocks to up-stream or down-stream fluid-handling devices, namely, by using “a series of commands gradually changing the state of a given

fluid-handling device, for instance gradually ramping up or down the speed of a pump or gradually opening or closing a valve." Despite both the Plaintiff and Court identifying the specification citations above as sufficient disclosure under § 112(f), Defendants rested on their opening brief and made no responsive arguments to this disclosure. ECF 68 at 17 n.11. As Defendants have failed to provide any analysis or argument as to why such disclosure is insufficient to meet the definiteness requirement, much less by a clear and convincing evidence standard, the Court rejects Defendants' indefiniteness arguments. The parties do not identify any relevant information in the prosecution history, and nothing in the prosecution history appears to be contrary to the Court's understanding.

The Court therefore construes **"steps for mitigating shocks to up-stream or down-stream fluid handling devices"** as subject to § 112(f), concludes that it is not indefinite, and construes the phrase as follows:

Function: Mitigating shocks to up-stream or down-stream fluid handling devices.

Corresponding Structure: Acts disclosed in the '403 Patent at 6:35-40, and equivalents thereof.

P. Term #16: "the sequence of different target states that change over time are determined with steps for mitigating shocks to up-stream or down-stream fluid-handling devices relative to the first pump"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #16: "the sequence of different target states that change over time are determined with steps for mitigating shocks to up-stream or down-stream fluid-handling devices relative to the first pump" U.S. Patent No. 11,294,403, Cl. 5 Proposed by Defendants	**Function:** Determining different target states that change over time for mitigating shocks to up-stream or down-stream fluid handling devices **Structure:** Site master-controller and equivalents (see '403 Patent at 6:35-40)	Indefinite

ECF No. 76 at 8.

The Parties' Positions

Defendants argue that the term includes "step for" language, such that it is presumed to be subject to § 112(f). ECF 56 at 28.[12] Defendants further argue that the specification does not specify what steps are for "mitigating shocks" or include an algorithm for how the steps can be performed. *Id.* (citing *Aristocrat Techs.*, 521 F.3d at 1331). Defendants argue that Plaintiff's initial proposed instruction, "the sequence of different target states that change over time are determined such that

[12] Defendant initially included two constructions for this term in the opening brief in two separate sections. In Section III of its opening brief, titled "DISPUTED CLAIM CONSTRUCTIONS (NOT INDEFINITE)," Defendants did not argue the term was indefinite and proposed a construction, "issuing a set or series of commands from the site master controller designed to reduce shocks to upstream or downstream fluid-handling devices." ECF 56 at 14. In Section IV of the same brief, titled "INDEFINITE: MEANS PLUS FUNCTION—STEPS PLUS FUNCTION—MODULE," Defendants argued the same term was indefinite. *Id.* at 27-28. After the Court's Order Granting-in-Part and Denying-in-Part Plaintiff's Motion to Strike (ECF 61), Defendants identified the term in relation to its indefiniteness arguments only, dropping the separate proposed construction. *See* ECF 64 at 2.

shocks to up-stream or down-stream fluid-handling devices relative to the first pump are mitigated," eliminates the "steps for" language and therefore materially alters claim scope. *Id.*

Plaintiff responds that the recited function is performed by the site master-controller as explained in the '403 Patent specification at 6:35-40. Plaintiff argues a skilled person would understand that the site master-controller mitigates shocks to up-stream or down-stream devices by issuing a series of commands gradually changing states of a fluid handling device, rather than rapidly oscillating states. ECF 65 at 33. Plaintiff further responds that *Aristocrat Techs.* is not relevant because a skilled person would understand the site master-controller to be a special-purpose SCADA device that performs steps in a "special series of commands" to fluid handling device controllers. *Id.* at 33-34.

Defendants reply argues that the Plaintiff's revise construction invoking § 112(f) also eliminates the 'steps for' language and cites the same structure Plaintiff cited for the term "steps for mitigating shocks to up-stream or down-stream fluid handling devices." ECF 68 at 17-18. Defendants argue that structure does not disclose "the sequence of different target states." *Id.* at 18.

Plaintiff replies that its proposed construction does not eliminate the "steps for" language, but that a skilled person would have understood the disclosed master-controller is a special-purpose SCADA device designed to perform the steps required to mitigate shocks to up-stream or down-stream fluid-handling devices. ECF 73 at 16. Plaintiff argues that the additional language "the sequence of different target states that change over time" does not materially affect the term's construction. *Id.* Plaintiff further argues that a person of ordinary skill would have understood that "steps for mitigating shock determined the sequence of target states that gradually changed the state of a given fluid handling device." *Id.* (citing ECF 65 at 33, Durham Decl. at ¶ 88). Plaintiff

alleges that is partially because some local controllers lacked processing power to create complicated commands. *Id.* (citing '403 Patent at 6:23-24; Durham Decl. at ¶ 89).

The Court's Analysis

This identified claim term wholly encompasses Term #15, "steps for mitigating shocks to up-stream or down-stream fluid-handling devices." Indeed, Defendants' opening brief indefiniteness argument in relation to this term focused solely on the "steps for" language, arguing insufficient disclosure of steps or algorithm for "mitigating shocks," and that Plaintiff's initial proposed construction eliminated the "steps for" language. ECF 56 at 28. It is only in their reply brief that Defendants for the first time intimated a separate indefiniteness argument in relation to the prior language, "the sequence of different target states that change over time." ECF 68 at 17. In its reply, Defendants argue that the claims and specification do not disclose or explain what steps are for determining "the sequence of different target states that change over time" or include structure or algorithm for how the steps can be performed. *Id.* As a result, Defendants argue this is a separate basis for indefiniteness. *Id.* at 17-18. Because the Court addressed Term #15 *supra*, including Defendant's indefiniteness arguments for the term as used in claim 5 of the '403 Patent, it does not need to address Defendants' duplicative arguments here. Consequently, the Court will only address Defendants' arguments as to the remaining portion of the phrase, "the sequence of different target states that change over time are determined with."[13]

In addition to arguing indefiniteness of this portion of the term for the first time in its reply brief, Defendants' reply position is inconsistent with how it has approached both the greater term as a whole and the included term "sequence of different target states that change over time." As

[13] Defendants do not make any argument relating the last part of the term, "relative to the first pump," and there does not appear to be any dispute as to its meaning. As a result, no construction is necessary for this portion of the term.

discussed *supra*, Defendants' opening brief included a separate proposed construction for the entire term, namely "issuing a set or series of commands from the site master controller designed to reduce shocks to upstream or downstream fluid-handling devices." ECF 56 at 14 (citing '403 Patent at 6:32-40). Within the same brief, Defendants' separate argument for indefiniteness of the same term related solely to the language found in Term #15. *Id.* at 27-28. This is inconsistent with Defendants' reply brief position that the introductory part of the phrase is indefinite. *See* ECF 68 at 17-18; *see also Markman* Hr'g Tr. 60:12-16 Jan. 26, 2024. Second, to the extent Defendants take the position that the phrase "sequence of different target states that change over time" is indefinite in claim 5 of the '403 Patent, Defendants have also done so inconsistently across claims. The phrase in claim 5 depends from its antecedent basis in claim 1 of the '403 Patent, which Defendants have not argued as indefinite for use of the same phrase. Defendants also have not argued that identical language is indefinite in the many other asserted claims in which it appears (*see, e.g.*, '403 claims 4, 6, 24; '504 claims 1-4, 20). Defendants have offered no explanation justifying this inconsistency. Accordingly, Defendants have not met their burden to prove indefiniteness by clear and convincing evidence.

Defendants also take the position that Plaintiff's proposed function and structure fail to provide sufficient detail for "determining the sequence of different target states that change over time." ECF 68 at 17-18 (cleaned up). To the extent Defendants are arguing that the phrase "the sequence of different target states that change over time" is also governed by § 112(f), the Court rejects their argument. The phrase does not use either "steps for" or "means for" language, nor does the phrase include any indication of functional claiming. Further, included Term #15, while invoking § 112(f), does not claim a function of "determining the sequence of different target states that change over time."

The Court therefore expressly rejects Defendants' indefiniteness argument. Based on the discussion above, no further construction is necessary as to the phrase "the sequence of different target states that change over time are determined with." *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79. Included Term #15 shall be construed as articulated *supra*.

The Court accordingly construes **"the sequence of different target states that change over time are determined with"** is not indefinite and should be construed according to its **plain meaning**. The Court further construes included Term #15 as identified *supra*.

Q. Term #17: "steps for identifying protocols and control busses"

Term	**Plaintiff's Proposed Construction**	**Defendants' Proposed Construction**
Term #17: "steps for identifying protocols and control busses" U.S. Patent No. 11,294,403, Cl. 19; and U.S. Patent No. 11,726,504, Cl. 15 Proposed by Defendants	**Function:** Identifying protocols and control busses **Structure:** Protocol multiplexer, and equivalents (see '403 Patent at 9:24-38)	Indefinite

ECF No. 76 at 8.

The Parties' Positions

Defendants argue that the specification does not specify what steps are for "identifying protocols and control busses" or disclose an algorithm for how protocols and control busses are identified. ECF 56 at 27 (citing *Aristocrat Techs.*, 521 F.3d at 1331).

Plaintiff responds that the recited function is performed by the protocol multiplexer as described in the specification. ECF 65 at 34 (citing '403 Patent at 9:24-38). Plaintiff further responds that a skilled person would understand that "the steps of identifying protocols and control

busses (e.g., selecting between modbus, binary or analog voltage or current signal, Ethernet protocols and associated busses) are performed by the control multiplexer." *Id.* at 34-35 (citing Durham Decl. at ¶¶ 91-93.

The Court's Analysis

Claim 19 of the '403 Patent depends from claim 9, which further depends from claim 1. Claims 9 and 19 recite:

> 9. The system of claim 1, wherein the first computer system is configured to translate a plurality of commands from the server system, including the command, from an input format to a plurality of different formats and protocols configured to effectuate changes in states of a plurality of different fluid-handling devices at the first fluid-handling site, the different fluid-handling devices including the first pump or the first valve.
>
> 10. The system of claim 9, wherein translating the plurality of commands comprises *steps for identifying protocols and control busses*.

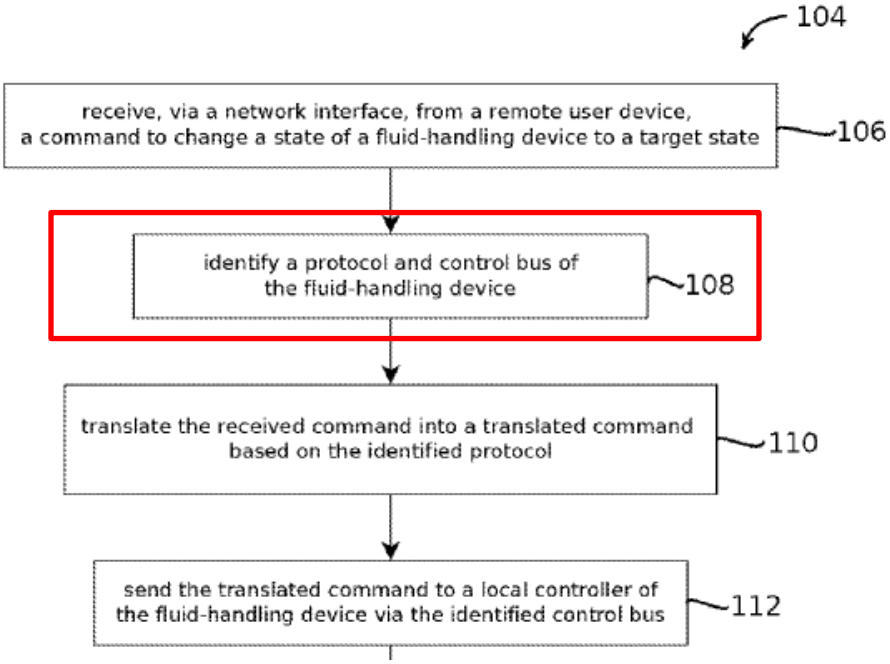
'403 Patent at 17:49-56, 18:29-31 (emphasis added). Claim 15 of the '504 Patent similarly depends from claim 7, which further depends from claim 1. Claims 7 and 15 recite:

> 7. The system of claim 1, wherein the first computer system is configured to translate a plurality of commands from the server system, including the command, from an input format to a plurality of different formats and protocols configured to effectuate changes in states of a plurality of different fluid-handling devices at the first fluid handling site.
>
> 8. The system of claim 7, wherein translating the plurality of commands comprises *steps for identifying protocols and control busses*.

'504 Patent at 17:51-55, 18:23-25 (emphasis added).

Both parties assert that this term is subject to 35 U.S.C. by § 112(f), and the Court agrees. The relevant limitation is drafted in step-plus-function form, wherein the relevant function is "identifying protocols and control busses," without further guidance on how to perform such steps.

As described in claim 9 of the '403 Patent and claim 7 of the '504 Patent, "translating a plurality of commands" is identified in context as being "from an input format to a plurality of different formats and protocols configured to effectuate changes in states of a plurality of different fluid-handling devices at the first fluid-handling site." '403 Patent at 17:49-56; '504 Patent at 17:51-55. The specification illustrates the steps of identifying a protocol and control bus of the fluid-handling device in block 108 of process figure 104 in Figure 2.



'403 Patent, Fig. 2 (emphasis added). The specification further describes these steps as follows:

> In some embodiments, the process 104 includes identifying a protocol and control bus of the fluid-handling device, as illustrated by block 108. *Identifying a protocol and control bus may include parsing an identifier of a device, actuator, or sensor from the received command and retrieving a corresponding record based on the identifier, the record including an identifier of the protocol and control bus. In some embodiments, the retrieved record may also include an identifier of a control bus address of the corresponding device, actuator, or sensor.*

Id. at 11:65-12:7 (emphasis added). The specification identifies several acts for translating commands, including examples of such acts, as shown below.

> In this embodiment, when the site management module 70 receives a command via the network interface 68, or issues its own command (e.g., to poll sensors or alarm logs), the command is conveyed to a protocol multiplexer 72, *which may be operative to determine which control bus 60 and fluid-handling device 38 will receive a corresponding translated command*. For example, the protocol multiplexer 72 may store in memory records for communicating with the fluid-handling devices 38. Each record may correspond to a individual fluid-handling device 38 or an individual actuator or sensor of a fluid-handling device, and each record may include a unique identifier of the corresponding device, actuator, or sensor; a control bus address of the device, actuator, or sensor (for those components on a control bus that is addressable); an identifier of the control bus 62, 64, or 66 through which the site master-controller 18 communicates with the device, actuator, or sensor; and an identifier of the protocol through which such communication occurs.
>
> When a command is received at the protocol multiplexer 72, in some embodiments, the command includes the identifier of the device, actuator, or sensor to which the command is directed, and using this identifier, *the protocol multiplexer 72 retrieves the corresponding record from memory to identify the appropriate protocol*. In this example, based on the protocol in the record, the protocol multiplexer 72 selects among the command translators 74, each of which corresponds to a different protocol. For example, the command translator 80 may correspond to a protocol of control bus 66, such as the modbus RTU protocol; the command translator 78 may corresponds to a protocol of the control bus 64, such as a binary or analog voltage or current signal conveyed via a data acquisition board; and the command translator 76 may corresponds to a protocol of the control bus 62, such as the Ethernet protocol.

'403 Patent at 9:5-38 (emphasis added). Again, Defendants made no argument in the *Markman* hearing that the acts identified by the Court failed to provide sufficient disclosure. As such, Defendants have failed to prove indefiniteness by clear and convincing evidence. The parties do not identify any relevant information in the prosecution history, and nothing in the prosecution history appears to be contrary to the Court's understanding.

The Court accordingly construes **"steps for identifying protocols and control busses"** as subject to § 112(f), concludes that it is not indefinite, and construes the phrase as follows:

Function: Identifying protocols and control busses.

Corresponding Structure: Acts disclosed in the '403 Patent in block 108 of process 104 in Figure 2 and further described at 9:8-38 and 11:65-12:7, and equivalents thereof.

R. Term #18: "one or more properties associated with the first fluid"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #18: "one or more properties associated with the first fluid" U.S. Patent No. 11,726,504, Cl. 1 Proposed by Defendants	Plain and ordinary meaning	Indefinite

ECF No. 76 at 9.

The Parties' Positions

Defendants argue that, a preceding element in claim 1 uses the phrase "one or more properties of a first fluid," and the specification "does not provide definition for the terms 'of' or 'associated with,' nor is there any referenced standard in the industry that would reveal the respective meanings of the different respective meanings of the different language used in connection with the properties and fluid." ECF 56 at 37.

Plaintiff responds that a person of ordinary skill would understand that "of" and "associated with" mean the same thing in this context. ECF 35 at 35 (citing Durham Decl. at ¶ 95). Plaintiff further responds that the specification identifies a range of properties that are "associated" with fluids, such as temperature, viscosity, and flow rate. *Id.* (citing '504 Patent at 6:5-8). Plaintiff also

argues that a person of ordinary skill would have knowledge of various fluid properties such that the term would be definite. *Id.* (citing Durham Decl. at ¶ 95).

Defendants reply that the specification "does not describe how the first fluid and subsequent fluids might have different properties," it is "unclear whether the same or different properties are meant, or what relationship between a property and a fluid will meet the different scope resulting from the use of different language." ECF 68 at 18. Defendants further reply that the specification cited by Plaintiff identifies types of fluid sensors, not fluid properties, and it would be "erroneous to substitute a POSITA's knowledge for inadequate discloser in the claims and specification." *Id.*

Plaintiff replies that Defendants' argument that "of a first fluid" and "associated with a first fluid" have distinct meanings is "grammatically nonsensical" and that a person of skill would "understand the two phrases to mean the same thing." ECF 73 at 17 (citing Durham Decl. at ¶ 95). Plaintiff further replies that the specification discusses different varieties of fluid-handling devices sensors and provides sufficient information regarding fluid properties for a person of skill because those sensors primarily measure the properties of fluids. *Id.* Plaintiffs conclude that, by disclosing types of sensors used by fluid-handling devices, the specification discloses properties of fluids. *Id.*

The Court's Analysis

Claim 1 of the '504 Patent recites (emphasis added):

> 1. A fluid processing system, comprising:
> a first computer system disposed at a first fluid handling site, wherein the first computer system is configured to:
> *receive information comprising one or more properties of a first fluid from one or more sensors disposed at a first fluid tank* itself disposed at the first fluid-handling site, the fluid-handling site comprising one or more fluid-handling devices, the one or more fluid-handling devices comprising one or more of a first pump, a first filter, and a first valve; and

provide remote control of a first fluid-handling device of the one or more fluid-handling devices; and

a server system wherein the server system has memory storing instructions that, when executed, effectuate operations comprising:

receiving, with the server system, from the first computer system, via a network, *a first fluid property of the one or more properties associated with the first fluid sensed by a first sensor of the one or more sensors*;

obtaining, with the server system, credentials from a first client computing device;

determining, with the server system, based on the credentials, that a user of the first client computing device is authorized to interact with the first fluid handling site, wherein the server system hosts data about other fluid handling sites the user is not authorized to interact;

after the determination, providing, with the server system, via the network, information by which a first client computing device presents a user interface indicating the first fluid property, the first client computing device being remote from the server system and the first computer system;

receiving, with the server system, from the first client computing device, a first command to change a state of the first fluid-handling device; and

causing, with the server system, the first computer system disposed at the first fluid handling site to effectuate the command by changing the state of the first fluid-handling device to a sequence of different target states that change over time.

The language of the claim is clear, such that a person of ordinary skill would understand that the "one or more properties of a first fluid" are the same "one or more properties associated with the first fluid" cited later in the claim. Neither of the prepositional phrases "of" or "associated with" are argued to be terms of art, and both may indicate identification of a relationship such that they could be used interchangeably in common usage. The claim identifies in both instances that the relationship is between the "one or more properties" and the "first fluid." Additional context surrounding each claim also suggests they are describing the same properties. The first computer system is configured to "receive information comprising one or more properties of a first fluid

from one or more sensors disposed at a first fluid tank" at a first fluid-handling site. '504 Patent at 16:52-57. The fluid-handling site is recited to comprise "one or more fluid-handling device comprising one or more of a first pump, a first filter, and a first valve." *Id.* at 16:57-60.[14] In reference to the term at issue, a server system receives "from the first computer system," "a first fluid property of the one or more properties associated with the first fluid sensed by a first sensor of the one or more sensors." *Id.* at 16:66-17:3. The claim language ties the instances of "one or more fluid properties" together as originating from one of the "one or more sensors" disposed at a first fluid tank. *Id.* at 16:54-56; *id.* at 16:67-17:3. The "one or more fluid properties" are also identified as being first received by the first computer system and then received by the server system from the first computer system. *Id.* at 16:53-56; *id.* at 16:67-17:3.

Defendants' do not argue that "one or more properties of a first fluid" fails to provide sufficient antecedent basis for the term "the one or more properties associated with the first fluid." Defendants do not cite to any language in the specification that suggests a difference in usage between the two terms in context of fluid properties to cause ambiguity. Nor do Defendants argue that the terms must have different meanings due to identifiable differences between "of" and "associated with." Instead, Defendants' argument is that "it is unclear" whether such differences exist. ECF 68 at 18. None of these arguments amount to clear and convincing evidence that a person of ordinary skill would not understand the scope of the term with reasonable certainty. Therefore, the Court rejects Defendants' arguments of indefiniteness and no further construction

[14] The '504 Patent specification recites that fluid-handling devices "may include a variety of types of sensors, for instances, a temperature, viscosity, flowrate, fluid level, pressure, conductivity, or other parameter sensor." *Id.* at 6:5-8. Because the claim recites the "one or more properties" are received from such sensors, and the identified sensors measure various fluid properties as would be understood by a person of ordinary skill, Defendants' argument regarding alleged inadequate disclosure is rejected. *See* ECF 68 at 18.

is necessary. *See U.S. Surgical*, 103 F.3d at 1568; *see also O2 Micro*, 521 F.3d at 1362; *Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79.

The Court accordingly concludes that the term **"one or more properties associated with the first fluid"** is not indefinite and should be construed according to is **plain meaning**.

S. Term #19: "a first client computing device"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
Term #19: "a first client computing device" U.S. Patent No. 11,726,504, Cls. 1, 20 Proposed by Defendants	"the first client computing device" only in second instance at claims 1 and 20 ('504 Patent at 17:13-14, 20:5-6)	Indefinite

ECF No. 76 at 9.

The Parties' Positions

Defendants argue that the term "a first client[15] computing device" appears twice in each of independent claims 1 and 20, such that "it is unclear whether the same device or two devices are required." ECF 56 at 38.

Plaintiff responds that the term originally identified by Defendants, "a first computing device" does not appear in the identified claims and that Plaintiff was "unable to determine the actual term within the claims that Defendants deem indefinite," and reserves the right to respond after further clarification. ECF 65 at 36.

[15] Defendants state that they inadvertently left the word "client" out of the term as identified in their Opening Brief. ECF 56 at 38; ECF 68 at 19 n.4.

Defendants reply that because the identified term appears multiple times in claims 1 and 20, the claims are identifying multiple client computing devices each as a "first" device and are therefore indefinite. ECF 68 at 19. Defendants further reply that Dr. Durham's declaration identifies multiple computing devices that are disclosed and claimed in the asserted patents. *Id.* (citing Durham Decl. at ¶¶ 98-100).

Plaintiff replies that Defendants' argument of indefiniteness is "belied by the fact that Defendants themselves offered a construction for the term in their opening brief—discussing the term twice, but then . . . chose to argue the term is indefinite." ECF, 73 at 17 (citing ECF 56 at § III.5 ("first client computing device"), § IV.D.14 ("a first computing device"). Plaintiff argues Defendants cannot argue the term is indefinite when Defendants proposed a construction. *Id.* Plaintiff argues that second instance of the phrase in each of claim 1 and claim 20 should be construed as "the first client computing device" to correct the "minor clerical errors." Plaintiff argues the specification teaches that "the client device that receives data from fluid-handling sites is the same device that has its credentials verified earlier in the process." *Id.* at 17-18 (citing '504 Patent at 2:54-58, 4:26-29). Plaintiff further argues that, logically, a second device should not be able to receive data a first device was authorized to receive, it would bypass the "critical security feature of the claimed invention." *Id.* at 18 (citing '504 Patent at 3:52-58). Plaintiff argues that its reading is consistent with the understanding of a person of skill in the art. *Id.* (citing Durham Decl. at ¶ 98). Plaintiff replies that Defendants provide no support for their argument that "it is unclear whether one or two devices is required," and therefore fail to meet their burden. *Id.* at 19.

The Court's Analysis

Defendants originally identified two separate terms for constructions relating to this term, "first client computing device" ('403 Patent claims 1, 7, 30; '504 Patent claims 1, 5, 20), and "a

first computing device" (inadvertently omitting "client" from the term) ('504 Patent claims 1, 20). For the former term, Defendants proposed a construction of "first customer computing device," and for the latter, Defendants argued the term was indefinite for appearing twice in both identified claims. As a result of the Court's Order on Plaintiff's Motion to Strike Defendants' Claim Construction Briefing (ECF 61), Defendant dropped identification of "first client computing device" and only identified "a first computing device" for construction related to the '504 Patent, claims 1 and 20. ECF 64 at 3. From that point through the remaining briefing, both parties only identified the '504 Patent, claims 1 and 20, as related to the construction of this term. Then, in the Joint Claim Construction Statement, the parties jointly identified for the first time the '403 Patent, claims 1, 7, and 30 as included for this term, as well as the Defendants identifying claim 5 of the '504 Patent. ECF 76 at 9.

The Court will only address the allegations of indefiniteness as identified in the Defendants' Amended Notice of Claim Terms for Construction (ECF 64) in relation to claims 1 and 20 of the '504 Patent. Defendants chose to drop its construction arguments related to the '403 Patent claims and '504 Patent claim 5 when narrowing terms for construction; it cannot now revive them by attaching them to a separate argument. Even if the Court allowed it to do so, none of the arguments made by the parties in briefing relate to the newly-identified claims, such that the remaining terms fall outside of the parties' briefing. For example, claim 5 of the '504 Patent and claim 7 of the '403 Patent do not include the term "a first client computing device," and neither of the parties have articulated the relevance of the term to these claims. As another example, Defendants' sole argument for its proposed indefiniteness construction is that the term "a first client computing device" appears twice in each of claims 1 and 20 of the '504 Patent. ECF 56 at 38; ECF 68 at 19. In contrast, with respect to the '403 Patent, independent claims 1 and 30 were

corrected via a certificate of correction prior to filing of this litigation, issued January 10, 2023, changing the second use of "a first client computing device" in each claim to "the first client computing device." ECF 56-6 at 16; s*ee Sw. Software, Inc. v. Harlequin Inc.*, 226 F.3d 1280, 1284 (Fed. Cir. 2000) (holding that "for causes arising after the PTO issues a certificate of correction, the certificate of correction is to be treated as part of the original patent—i.e., as if the certificate had been issued along with the original patent."). Consequently, Defendants' arguments are inapplicable to those claims.

Turning to claims 1 and 20 of the '504 Patent, claim 1 recites:

> 1. A fluid processing system, comprising:
> a first computer system disposed at a first fluid handling site, wherein the first computer system is configured to:
> receive information comprising one or more properties of a first fluid from one or more sensors disposed at a first fluid tank itself disposed at the first fluid-handling site, the fluid-handling site comprising one or more fluid-handling devices, the one or more fluid-handling devices comprising one or more of a first pump, a first filter, and a first valve; and
> provide remote control of a first fluid-handling device of the one or more fluid-handling devices; and
> a server system wherein the server system has memory storing instructions that, when executed, effectuate operations comprising:
> obtaining, with the server system, credentials from *a first client computing device*;
> determining, with the server system, based on the credentials, that a user of the first client computing device is authorized to interact with the first fluid handling site, wherein the server system hosts data about other fluid handling sites the user is not authorized to interact;
> after the determination, providing, with the server system, via the network, information by which *a first client computing device* presents a user interface indicating the first fluid property, the first client computing device being remote from the server system and the first computer system;
> receiving, with the server system, from the first client computing device, a first command to change a state of the first fluid-handling device; and

causing, with the server system, the first computer system disposed at the first fluid handling site to effectuate the command by changing the state of the first fluid-handling device to a sequence of different target states that change over time.

'504 Patent at 16:51-17:25 (emphasis added). Claim 20 recites:

20. A tangible, non-transitory, machine-readable medium storing instructions that, when executed by a computer processor, effectuate operations comprising:

measuring, with one or more sensors at a first fluid tank located at a first-fluid handling site, one or more properties associated with a first fluid;

receiving, with a first computer system disposed at a first fluid handling site, information associated with the one or more properties associated with the first fluid;

providing, with the first computer system, remote control of a first fluid-handling device of a plurality of fluid-handling devices, the first fluid-handling device comprising at least one of a first pump, a first filter, and a first valve;

receiving, with a server system, from the first computer system, via a network, a first fluid property of the one or more properties associated with the first fluid sensed by a first sensor of the one or more sensors;

obtaining, with the server system, credentials from *a first client computing device*;

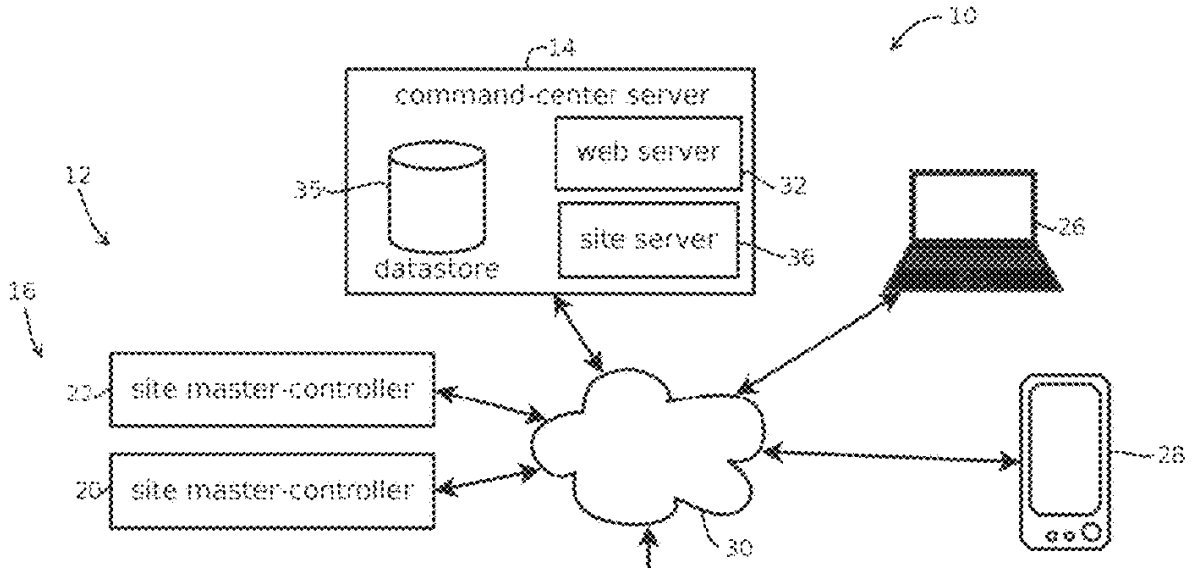
determining, with the server system, based on the credentials, that a user of the first client computing device is authorized to interact with the first fluid handling site, wherein the server system hosts data about other fluid handling sites the user is not authorized to interact;

after the determination, providing, with the server system, via the network, information by which *a first client computing device* presents a user interface indicating the first fluid property, the first client computing device being remote from the server system and the first computer system;

receiving, with the server system, from the first client computing device, a first command to change a state of the first fluid-handling device; and

causing, with the server system, the first computer system disposed at the first fluid handling site to effectuate the command by changing the state of the first fluid-handling device to a sequence of different target states that change over time.

Id. at 18:62-20:17 (emphasis added). As noted by Defendants, it is unclear from the text of the claims whether one or two client computing devices must be utilized for purposes of infringement of claims 1 and 20. ECF 68 at 19. In both claims, the term "a first client computing device" is used twice, first in the context of providing credentials to the server system, and second in the context of the server system provides to "a first client computing device" information by which the device presents a user interface, after the server system determines, based on the credentials, "that a user of the first client computing device is authorized to interact with the first fluid handling site. *Id.* at 17:4-17; *id.* at 19:14-20:9. As identified by Defendants during the *Markman* hearing (*Markman* Hr'g Tr. 98:2-6 Jan. 26, 2024), Figure 1 of the patent shows two client computing devices, labeled 26 and 28, as shown below.



Id. at Fig. 1. The specification discloses that multiple such user devices may be utilized with a single site master-controller and corresponding fluid-handling site:

> Each site master-controller 16 may be co-located with a corresponding fluid-handling site 24 and, in some embodiments, may include logic that implements remotely issued commands, such that *once a command is issued from user devices 26 or 28 and received at a site master-controller 16*, the site master-controller 16,

> in some embodiments, executes the command to completion, even if Internet access is lost before the command is fully executed. . . . And in some implementations, the *command-center server 14 may be operative to present a command interface and receive commands via a web interface in a web browser on user devices 26 and 28*, such that fluid-handling devices can be controlled remotely without the need to install special-purpose software on the computing device through which remote control is exercised. . . . The command-center server 14 may act as a central node *through which any of a plurality of user devices, such as user devices 26 and 28 (e.g., laptops, tablets, desktop computers, smartphones, and the like), issue commands to any of a plurality site master-controller 16, provided that such access is authorized*. Only two user devices and three site master-controllers are shown for simplicity of explanation, but implementations including substantially more of each are envisioned, such as more than several hundred or several thousand user devices and more than several hundred or several thousand site master-controllers, for example.

'504 Patent at 3:28-63 (emphasis added). Although in some instances the specification uses exclusive language, such as "26 or 28," the specification further identifies use of at least two user devices for remote interface and control in at least some examples. The only requirement cited in the specification is that access through a user device must be "authorized," but it does not prevent—and appears to disclose—authorization and user access on multiple devices. Consequently, Plaintiff's proposed correction is improper because the correction is subject to reasonable debate based on consideration of the claim language and specification. It would be reasonable for a person of ordinary skill to understand the second instance of the term to be corrected as either "a second client computing device" or alternatively "the first client computing device." Because each of claim 1 and 20 do not "inform those skilled in the art about the scope of the invention with reasonable certainty," *Nautilus*, 572 U.S. at 910, the claims are indefinite under § 112(b). For sake of clarity, this determination relates only to claims 1 and 20 of the '504 Patent and does not extend to other uses of the term "a first client computing device" in any other patent.

The Court accordingly concludes that **claims 1 and 20 of the '504 Patent are indefinite under § 112(b)**.

VII. CONCLUSION

In conclusion, for the reasons described herein, the Court adopts the constructions in Appendix A, below, as its final constructions.

The Court **ORDERS** each party not to refer, directly or indirectly, to its own or any other party's claim construction positions in the presence of the jury. Likewise, the Court **ORDERS** the parties to refrain from mentioning any part of this opinion, other than the actual positions adopted by the Court, in the presence of the jury. Further, neither party may take a position before the jury that contradicts the Court's reasoning in this opinion. Any reference to claim construction proceedings is limited to informing the jury of the positions adopted by the Court.

IT IS SO ORDERED.
SIGNED this 23rd day of February, 2024.

DEREK T. GILLILAND
UNITED STATES MAGISTRATE JUDGE

APPENDIX A

Term	Plaintiff's Proposal	Defendants' Proposal	Court's Final Construction
Term #1: "communication module operable to communicate U.S. Patent No. 8,649,909, Cl. 1	Plain and ordinary meaning, or if determined to be a means-plus-function term: **Function:** Communicating with a fluid-handling device or devices **Structure:** Input/output modules and equivalents (*See, e.g.*, '909 Patent at 1:52-53, 10:26-38)	Indefinite	**Not subject to § 112(f); plain and ordinary meaning** **Not indefinite**
Term #2: "translating" U.S. Patent No. 8,649,909, Cls. 1, 20-21; U.S. Patent No. 9,898,014, Cls. 19, 20; U.S. Patent No. 9,342,078, Cl. 1; U.S. Patent No. 10,488,871, Cl. 32; U.S. Patent No. 11,175,680, Cls. 4, 8; and U.S. Patent No. 11,726,504, Cls. 8, 15	Plain and ordinary meaning	Indefinite	**Plain and ordinary meaning** **Not indefinite**
Term #3: "at least some of the translated command" U.S. Patent No. 8,649,909, Cl. 1	At least some of the translated commands	Indefinite	**at least some of the translated commands** **Not indefinite**
Term #4: "the operation of the fluid-handling device" U.S. Patent No. 8,649,909, Cl. 2	Plain and ordinary meaning	Indefinite	**Plain and ordinary meaning** **Not indefinite**

Term #5: "the operation of an oil well, a petro water disposal or re-injection facility or a petroleum pumping station" U.S. Patent No. 8,649,909, Cl. 3	Plain and ordinary meaning	Indefinite	**Plain and ordinary meaning** **Not indefinite**
Term #6: "processes" U.S. Patent No. 8,649,909, Cl. 9	processors	Plain and ordinary meaning	**Plain and ordinary meaning**
Term #7: "each [ ] instructions" U.S. Patent No. 9,342,078, Cls. 1, 3-4	each [ ] instruction	Indefinite	**'078 claim 1 at 16:25 – plain and ordinary meaning** **'078 claim 1 at 16:34 – each of the received instructions** **'078 claim 1 at 16:39 – each of the one or more translated instructions** **'078 claim 3 – each of the one or more translated instructions** **'078 claim 4 – each of the one or more translated instructions**
Term #8: "ramp" U.S. Patent No. 9,342,078, Cl. 8; U.S. Patent No. 11,294,403, Cl. 4; and U.S. Patent No. 11,726,504, Cl. 2	Plain and ordinary meaning	Indefinite	**Plain and ordinary meaning** **Not indefinite**

Term #9: "facility-interface module or modules" U.S. Patent No. 9,898,014, Cls. 1, 5, 8-11, 17, 21; and U.S. Patent No. 10,488,871, Cls. 18, 22, 25, 30, 32	Plain and ordinary meaning, or if determined to be a means-plus-function term: **Function:** Obtaining data from the sensors at the facilities and sending commands to the actuators at the facilities via the cellular network connections **Structure:** Site server, and equivalents (*see, e.g.*, '014 Patent at 4:36-52)	Indefinite	**Subject to § 112(f)** **Function:** Obtaining data from the sensors at the facilities and sending commands to the actuators at the facilities via the [cellular] network connections. **Structure:** Site server 36 in Figure 1 and further described at 4:36-52 of the '014 Patent, and equivalents thereof.
Term #10: "web-interface module or modules" U.S. Patent No. 9,898,014, Cls. 1, 5, 9, 10	Plain and ordinary meaning, or if determined to be a means-plus-function term: **Function:** Sending instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices **Structure:** Web server, and equivalents (see '014 Patent at 3:47-4:6)	Indefinite	**Subject to § 112(f)** **Function:** Sending instructions to present control interfaces in web browsers executing on user computing devices logged in to the accounts and to receive commands to control actuators from the user computing devices. **Structure:** Web server 32 in Figure 1 of the '014 Patent and further described at 3:47-62, and equivalents thereof.
Term #11: "storing, with one or more processors, records" U.S. Patent No. 10,488,871, Cl. 18	Plain and ordinary meaning	Indefinite	**Plain and ordinary meaning** **Not indefinite**

Term #12: "steps for ensuring at least some data is not lost" U.S. Patent No. 10,488,871, Cl. 31	**Function:** Ensuring at least some data is not lost **Structure:** The site master-controller and associated report buffer, and equivalents (*see* '871 Patent at 11:9-24)	Indefinite	**Subject to § 112(f)** **Function:** Ensuring at least some data is not lost. **Corresponding Acts:** Acts disclosed in the '871 Patent in blocks 114, 116, and 118 of process 104 in Figure 2 and further described at 12:18-44, and equivalents thereof.
Term #13: "steps for translating commands" U.S. Patent No. 10,488,871, Cl. 32; U.S. Patent No. 11,294,403, Cl. 10; and U.S. Patent No. 11,726,504, Cl. 8	**Function:** Translating commands **Structure:** Command translator, and equivalents (*see* '403 Patent at 9:39-51)	Indefinite	**Subject to § 112(f)** **Function:** Translating [a] command[s]. **Corresponding Acts:** Acts disclosed in the '403 Patent in block 110 of process 104 in Figure 2 and further described at 9:39-10:30 and 12:8-12, and equivalents thereof.
Term #14: "steps for loosening a stuck valve" U.S. Patent No. 10,488,871, Cl. 33	**Function:** Loosening a stuck valve **Structure:** Site master-controller and equivalents (*see* '871 Patent at 6:26-29)	Indefinite	**Subject to § 112(f)** **Function:** Loosening a stuck valve. **Corresponding Acts:** Acts disclosed in the '871 Patent at 6:26-29 and 10:52-53, and equivalents thereof.

Term #15: "steps for mitigating shocks to up-stream or down-stream fluid handling devices" U.S. Patent No. 10,488,871, Cl. 34; U.S. Patent No. 11,294,403, Cl. 5; and U.S. Patent No. 11,726,504, Cl. 3	**Function:** Mitigating shocks to up-stream or down-stream fluid handling devices **Structure:** Site master-controller and equivalents (*see* '403 Patent at 6:35-40)	Indefinite	**Subject to § 112(f)** **Function:** Mitigating shocks to up-stream or down-stream fluid handling devices. **Corresponding Acts:** Acts disclosed in the '403 Patent at 6:35-40, and equivalents thereof.
Term #16: "the sequence of different target states that change over time are determined with steps for mitigating shocks to up-stream or down-stream fluid-handling devices relative to the first pump" U.S. Patent No. 11,294,403, Cl. 5	**Function:** Determining different target states that change over time for mitigating shocks to up-stream or down-stream fluid handling devices **Structure:** Site master-controller and equivalents (*see* '403 Patent at 6:35-40)	Indefinite	**Plain and ordinary meaning as to "the sequence of different target states that change over time are determined with"; not indefinite.** **Remainder is duplicative of Term #15; see construction for Term #15.**
Term #17: "steps for identifying protocols and control busses" U.S. Patent No. 11,294,403, Cl. 19; and U.S. Patent No. 11,726,504, Cl. 15	**Function:** Identifying protocols and control busses **Structure:** Protocol multiplexer, and equivalents (*see* '403 Patent at 9:24-38)	Indefinite	**Subject to § 112(f)** **Function:** Identifying protocols and control busses. **Corresponding Acts:** Acts disclosed in the '403 Patent in block 108 of process 104 in Figure 2 and further described at 9:8-38 and 11:65-12:7, and equivalents thereof.
Term #18: "one or more properties associated with the first fluid" U.S. Patent No. 11,726,504, Cl. 1	Plain and ordinary meaning	Indefinite	**Plain and ordinary meaning** **Not indefinite**

Term #19: "a first client computing device" U.S. Patent No. 11,726,504, Cls. 1, 20	Construe second instance for term in each of claims 1 and 20 as "the first client computing device."	Indefinite	**'504 Patent claims 1 and 20 are indefinite under § 112(b).**