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

ROY-G-BIV CORP.	§	
	§	
v.	§	**NO. 6:11-CV-622 (Lead Case)**
	§	
ABB, Ltd., ABB INC., MEADWESTVACO	§	
TEXAS, LP, and MEADWESTVACO	§	
CORP.	§	
	§	
	§	
ROY-G-BIV Corp.	§	
	§	
	§	
v.	§	**NO. 6:11-CV-623**
	§	
HONEYWELL INTERNATIONAL, INC.	§	
and MOTIVA ENTERPRISES, LLC	§	
	§	
	§	
ROY-G-BIV CORP.	§	
	§	
	§	
v.	§	**NO. 6:11-CV-624**
	§	
SIEMENS CORP., et al.	§	

CLAIM CONSTRUCTION MEMORANDUM OPINION AND ORDER

These cases are assigned for trial to the Honorable Leonard Davis, United States Chief District Judge, and are referred to the undersigned United States Magistrate Judge for claim construction purposes, including Defendants' Motion for Summary Judgment of Indefiniteness. (Doc. No. 158.) On June 19, 2013, the Court held a hearing to determine the proper construction of the claim terms in U.S. Patent Nos. 6,513,058; 6,516,236; 6,941,543; and 8,073,557, and to hear argument on the Defendants' Motion for Summary Judgment. See (Transcript, Doc. No. 183.) After considering the arguments made by the parties at the hearing and in the parties' claim construction and summary judgment briefing (Doc. Nos. 151, 157, 167, 168, 169, 171, 174, 175), the Court adopts the constructions set forth below. See also Appendix A.

Also before the Court is the Defendants' Joint Motion for Summary Judgment of Indefiniteness. (Doc. No. 168.) While the terms underlying that Motion are construed in this Order, the undersigned will also enter a separate report recommending that Chief Judge Davis deny the Defendants' Motion.

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I. Background

The Plaintiff Roy-G-Biv Corp. ("RGB") sued the following Defendants for infringement of U.S. Patent Nos. 6,513,058 ("the '058 Patent"), 6,516,236 ("the '236 Patent"), 6,941,543 ("the '543 Patent"), and 8,073,557 ("the '557 Patent"): ABB, Inc., Honeywell International, Inc., MeadWestvaco Corp., MeadWestvaco Texas, LP, Motiva Enterprises, LLC, Siemens AG, Inc., Siemens Corp., Siemens Industry, Inc., Siemens Product Lifecycle Management Software, Inc., and Siemens Product Lifecycle Management Software II (US), Inc.[1] RGB asserts claims 1–5 of the '058 patent, claims 1–10 of the '236 patent, claims 5–16 of the '543 patent, and claims 16–30 and 46–59 of the '557 patent.

The RGB Patents relate generally to "motion control" technology, in which the operation of motorized mechanical devices ("motion control devices") is controlled with software. More specifically, the RGB Patents are directed to a system that allows an application program to communicate with and control any one of a group of supported motion control devices that may speak different "languages." RGB describes the system in a three-tiered manner, involving an application program that generates control commands, "middleware" that translates control commands into a language understandable by software drivers, and device-specific software drivers that directly communicate with and control particular motion control devices.

RGB previously asserted three of the RGB Patents in ROY-G-BIV Corp. v. Fanuc Ltd., ("Fanuc"), No. 2:07-CV-418 (E.D. Texas). In that case, Judge David Folsom construed many of the same patent terms that are at issue in the present action. See Fanuc, No. 2:07-CV-418, 2009 U.S. Dist. LEXIS 127428 (E.D. Tex. Aug. 25, 2009) (construing claim terms in the '058, '236, and '543 Patents as well as U.S. Patent No. 5,691,897).

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1. This order refers to the four asserted patents collectively as "the RGB Patents" and all defendants collectively as "the Defendants."

II. Applicable Law

A. General Principles of Claim Construction

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting Innova/Pure Water Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004)). Courts generally give claim terms their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention. Id. at 1312–13. To determine the meaning of claims, courts begin by examining the intrinsic evidence. Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc., 262 F.3d 1258, 1267 (Fed. Cir. 2001); see also Phillips, 415 F.3d at 1313–14; C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 861 (Fed. Cir. 2004). The intrinsic evidence includes the claims themselves, the specification, and the prosecution history. Bell Atl. Network Servs., Inc., 262 F.3d at 1267; see also Phillips, 415 F.3d at 1314; C.R. Bard, Inc., 388 F.3d at 861.

"[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms." Phillips, 415 F.3d at 1314. First, a term's context in the asserted claim can be highly instructive. Id. Other asserted or unasserted claims may likewise provide guidance on a term's meaning since claim terms are typically used consistently throughout a patent. Id. Differences among claims can also assist in understanding a term's meaning. Id. For example, when a dependent claim adds a limitation to an independent claim, it is presumed that the independent claim does not include the limitation. Id. at 1314–15.

Claims must also be read in view of the specification. Id. at 1315 (quoting Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the

single best guide to the meaning of a disputed term.'" Id. (quoting Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)). This is true because a patentee may define her own terms, give a claim term a different meaning than the term would otherwise possess, or disclaim or disavow the claim scope. Id. at 1316. In these situations, the inventor's lexicography governs. Id. Further, the specification may serve to resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1325 (Fed. Cir. 2002). However, "particular embodiments and examples appearing in the specification will not generally be read into the claims." Comark Commc'ns, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed. Cir. 1998) (quoting Constant v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 1571 (Fed. Cir. 1988)) (internal quotation marks omitted); see also Phillips, 415 F.3d at 1323.

The prosecution history is another resource that courts should employ when defining claim terms. Phillips, 415 F.3d at 1317. The prosecution history "consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent." Id. "Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent." Id.; see also Diagnostics, Inc., v. LifeScan, Inc., 381 F.3d 1352, 1356 (Fed. Cir. 2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent."). But, because it represents "an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation," the prosecution history often lacks clarity and proves less useful for claim construction purposes than the specification. Phillips, 415 F.3d at 1317. The well-established doctrine of prosecution disclaimer "preclud[es] patentees from recapturing through claim interpretation specific meanings

disclaimed during prosecution." Omega Eng'g Inc. v. Raytek Corp., 334 F.3d 1314, 1323 (Fed. Cir. 2003).

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. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir. 2004)) (internal quotation marks omitted). Extrinsic evidence "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." Id. (quoting Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc)) (internal quotation marks omitted). Technical dictionaries and treatises may help a court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how the term is used in the patent. See id. at 1318. Similarly, expert testimony may aid a court in understanding the underlying technology and determining the particular meaning of a term in the pertinent field, but an expert's conclusory, unsupported assertions as to a term's meaning is entirely unhelpful to a court. Id. Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." Id.

B. Effect of Prior Claim Construction

As indicated above, many of the claim terms at issue were previously construed by Judge Folsom in a prior case where the Plaintiff asserted three of the patents in suit. Prior claim construction proceedings involving the same asserted patents are "entitled to reasoned deference under the broad principals of *stare decisis* and the goals articulated by the Supreme Court in *Markman*, even though *stare decisis* may not be applicable *per se*." Maurice Mitchell Innovations, LP v. Intel Corp., No. 2:04-CV-450, 2006 WL 1751779, at *4 (E.D. Tex. June 21,

2006) (Davis, J.). However, previous constructions are not compelling or binding: a court still conducts an independent evaluation during claim construction proceedings. See, e.g., Negotiated Data Solutions, Inc. v. Apple, Inc., No. 2:11-CV-390, 2012 WL 6494240, at *5 (E.D. Tex. Dec. 13, 2012) (Gilstrap, J.); Burns, Morris & Stewart Ltd. P'ship v. Masonite Int'l Corp., 401 F. Supp. 2d 692, 697 (E.D. Tex. 2005) (Clark, J.); Tex. Instruments, Inc. v. Linear Techs. Corp., 182 F. Supp. 2d 580 (E.D. Tex. 2002) (Folsom, J.).

C. Indefiniteness

Defendants also contend that some claims at issue are invalid for indefiniteness. A patent is presumed valid; therefore, the party seeking to invalidate a patent must overcome that presumption. 35 U.S.C. § 282; Microsoft Corp. v. i4i Ltd. P'ship, 131 S. Ct. 2238, 2243 (2011). The presumption places the burden on the challenging party to prove, by clear and convincing evidence, that the patent is invalid. Microsoft Corp., 131 S. Ct. at 2243–52; United States Gypsum Co. v. Nat'l Gypsum Co., 74 F.3d 1209, 1212 (Fed. Cir. 1996). Accordingly, close questions of indefiniteness "are properly resolved in favor of the patentee." Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1380 (Fed. Cir. 2001).

Claims must particularly point out and distinctly claim the patentee's invention. 35 U.S.C. § 112, ¶ 2 (2006) ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."). "Because the claims perform the fundamental function of delineating the scope of the invention, the purpose of the definiteness requirement is to ensure that the claims delineate the scope of the invention using language that adequately notifies the public of the patentee's right to exclude." Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations omitted). "The statutory requirement of particularity and distinctness in claims is met

only when [the claims] clearly distinguish what is claimed from what went before in the art and clearly circumscribe what is foreclosed from future enterprise." Id. (quoting United Carbon Co. v. Binney & Smith Co., 317 U.S. 228, 236 (1942)) (internal quotation marks omitted). Nonetheless, the definiteness requirement does not demand absolute clarity: only those claims "not amenable to construction" or "insolubly ambiguous" are indefinite. Id.; see also Halliburton Energy Servs., Inc. v. M-I LLC, 514 F.3d 1244, 1250 (Fed. Cir. 2008). A claim is insolubly ambiguous when a person of ordinary skill in the art could not determine the bounds of the claims. Halliburton Energy Servs., Inc., 514 F.3d at 1249.

"A determination of indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims." Atmel Corp. v. Info. Storage Devices, Inc., 198 F.3d 1374, 1378 (Fed. Cir. 1999) (quoting Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n, 161 F.3d 696, 705 (Fed. Cir. 1998)) (internal quotation marks omitted). "Indefiniteness, therefore, like claim construction, is a question of law . . . ." Id. When determining indefiniteness, the general principles of claim construction described above apply. Enzo Biochem, Inc. v. Applera Corp., 599 F.3d 1325, 1332 (Fed. Cir. 2010). To rule "on a claim of patent indefiniteness, a court must determine whether those skilled in the art would understand what is claimed when the claim is read in light of the specification." Bancorp Servs., L.L.C. v. Hartford Life Ins. Co., 359 F.3d 1367, 1372 (Fed. Cir. 2004).

"[A] difficult issue of claim construction does not *ipso facto* result in a holding of indefiniteness." Datamize, 417 F.3d at 1347 (citing Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1375 (Fed. Cir. 2001)). "If the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree," the claim is sufficiently clear to avoid invalidity on indefiniteness grounds.

Exxon, 265 F.3d at 1375. By finding a claim indefinite only when reasonable efforts at claim construction prove futile, a court accords respect to the statutory presumption of validity, protects the inventive contribution of patentees, and follows the requirement that clear and convincing evidence be shown to invalidate a patent. Datamize, 417 F.3d at 1347–48.

III. Construction of Agreed Upon Terms

The parties agreed to the construction of the following terms:

Terms	Claims in Which Term Appears	Agreed Definition
"driver code"	'236 Patent, claims 1–4, 6; '058 Patent, claims 1, 3, 4; '557 Patent, claims 16, 46; '543 Patent, claims 1, 5, 14	"code associated with a hardware device or group of related hardware devices, which helps generate commands necessary to perform motion control operations associated with at least some driver functions"
"control commands"	'236 Patent, claims 1, 4, 5, 8, 9; '058 Patent, claims 1, 3, 4; '557 Patent, claims 16, 23, 24, 26, 28, 46, 53, 54, 56, 58; '543 Patent, claims 1, 2, 5, 6, 13, 14, 16	"command codes in hardware language, which instruct a motion control device to perform motion control operations"
"motion control component"/ "motion component"	'236 Patent, claims 1, 4, 5, 10; '557 Patent, claims 16, 20, 27, 46, 47, 50, 57	"an intermediate software layer containing component code that is separate and distinct from the application program and the software driver"
"component function"	'236 Patent, claim 1; '058 Patent, claims 1–4; '557 Patent, claims 16–20, 29, 46–50; '543 Patent, claims 3, 8, 13, 16	"a hardware independent function that corresponds to a motion control operation"
"software driver"/ "driver"	'236 Patent, claims 1–3, 7; '058 Patent, claims 1, 3, 4; '557 Patent, claims 16, 21, 22, 27, 46, 51, 52, 55, 57; '543 Patent, claim 1, 5, 13, 14	"one or more controller dependent software modules that support some core driver functions and are used to control a hardware device or group of related hardware devices"
"component code"	'236 Patent, claim 1; '058 Patent, claims 1, 4; '557 Patent, claims 16–19, 22, 29, 46, 48–49, 52; '543 Patent, claim 16	"software code in the motion control component that associates at least some of the component functions with at least some of the driver functions"[2]

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2. The parties agreed on this construction after filing their briefs and prior to the *Markman* hearing. The parties notified the Court by phone of their agreement, and the Court confirmed that they were in agreement at the *Markman* hearing. (Doc. No. 183, at 135:4–8.)

In view of the parties' agreements on the proper construction of each of the identified terms, the Court adopts the parties' agreed-upon constructions as set forth above.[3] These agreed-upon constructions govern in this case as to these particular terms.

IV. Construction of Disputed Terms

A. "Motion Control"

Plaintiff's Proposed Construction	Defendants' Proposed Construction
no construction needed; in the alternative, "controlled movement"	control of movement of an object along a desired path

The noun "motion control" does not appear in the claims of the asserted RGB Patents. Instead, motion control is used as an adjective within two other claim terms that the parties have also asked the Court to construe: "motion control operation" and "motion control device." Because "motion control" was not used as a separate term in the claims, the Court instructed the parties at the *Markman* hearing that it did not intend to define motion control separately from the two terms that contained it. After considering the Court's preliminary construction of claim terms at the *Markman* hearing, the Defendants stated that they no longer believed that the Court needed to define "motion control." See (Doc. No. 18, at 9–11.)

Accordingly, the parties and the Court being in agreement, the Court finds that it is unnecessary to define "motion control."

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3. The parties also agreed on the construction of the term "primitive operations." As explained more fully below, the Court neither agrees with nor adopts the parties' construction for this term. See infra Part IV.C.

B. *"Motion Control Operations"*[4]

Plaintiff's Proposed Construction	Defendants' Proposed Construction
"abstract operations (such as GET POSITION, MOVE RELATIVE, or CONTOUR MOVE) that are performed on or by a motion control device"	hardware independent operations used to perform motion control (such as GET POSITION, MOVE RELATIVE, or CONTOUR MOVE)

In *Fanuc*, Judge Folsom construed this term as "abstract operations (such as GET POSITION, MOVE RELATIVE, or CONTOUR MOVE) used to perform motion control." Fanuc, No. 2:07-CV-418, 2009 U.S. Dist. LEXIS 127428, at *29–34 (E.D. Tex. Aug. 25, 2009).

In its Brief, RGB notes that the *Fanuc* construction is "correct if applied reasonably." (Doc. No. 151, at 9.) However, in order to preclude the Defendants from reading their proposed definition for motion control into this term, and excluding the preferred embodiment, RGB urges the Court to substitute "that are performed on or by a motion control device" for "used to perform motion control." (Id.) RGB argues that this is not a substantive change because operations performed on or by the motion control device advance the objective of performing motion control and thus are used to perform motion control. (Id.) Similarly, RGB also argues that "abstract" should be used instead of "hardware independent," in order to head off an argument that it fears the Defendants might later make. It also states that "abstract operations" is the language used in the specification. (Id. at 10) (citing '236 Patent, 7:24).

In their Brief, the Defendants argue that the specification describes motion control operations as used to move an object along a desired path. (Doc. No. 157, at 6) (citing '236 Patent, 8:26–30) ("motion control operations necessary to control a motion control device to move an object in a desired manner"). The Defendants also note that during reexamination of the '058 Patent, RGB described motion control operations as "operations used to perform motion control."

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4. '236 Patent, claims 1, 4; '058 Patent, claim 4; '557 Patent, claims 16, 46; '543 Patent, claims 14, 15.

(Id. at 9 and Ex. B, at 38.)   As for "hardware independent" instead of "abstract," the Defendants point out that the patents use the terms interchangeably and that "hardware independent" will likely be easier for a jury to understand.   (Id. at 7.)

1.   Analysis

The term "motion control operations" is used in claim 1 of the '236 Patent as follows:

> A system for generating a sequence of control commands for controlling a selected motion control device selected from a group of supported motion control devices, comprising:
>> a set of **motion control operations**, where each **motion control operation** is either a primitive operation *the implementation of which* is required to operate motion control devices and cannot be simulated using other motion control operations or a non-primitive operation that does not meet the definition of a primitive operation; . . . .

'236 Patent, claim 1 (emphasis added).   This demonstrates that a motion control operation is something that is implemented or performed.   The specification confirms that motion control operations are performed, and further explains that they are performed by motion control devices:

> The **motion control operations** are not specifically related to any particular motion control device hardware configuration, but are instead abstract *operations that all motion control device hardware configurations must perform* in order to function.

'236 Patent, 7:22–26.   Therefore, the claim terms and the specification make clear that a motion control operation is *performed by a motion control device*.   While RGB proposes a construction defining motion control operations as being performed "*on or by* a motion control device," the Court finds no support for defining the term this broadly.   The Court is unaware of motion control operations being described in the RGB patents as operations performed *on* a motion control device or *by* something other than a motion control device.

As the Defendants point out, motion control operations are also referred to in the specification and by RGB during reexamination as being used to move an object in a desired

manner or to perform motion control. (Doc. No. 157, at 6–9, and Ex. B, at 38) (citing '236 Patent, 8:26–30); see also '236 Patent, 7:20–22 ("The software system designer initially defines a set of motion control operations that are used to perform motion control."). However, defining motion control operations as used to perform motion control—what appears to be the general purpose of the claimed invention as a whole—while correct, provides little guidance to the jury as to what motion control operations actually are: the operations performed by the motion control devices. Further, the construction that the Court gives to "motion control device," *infra*, makes clear that such devices move objects in a desired manner. See infra Part IV.D (construing "motion control device" as "a device comprising a controller and a mechanical system capable of moving an object in a desired manner"). Therefore, the Court rejects the Defendants' construction as it pertains to this issue.

Regarding the dispute over "abstract" or "hardware independent," the Court agrees with the Defendants that the two terms as used synonymously: "The motion control operations are *not specifically related to any particular motion control device hardware configuration, but are instead abstract operations* that all motion control device hardware configurations must perform in order to function." '236 Patent, 7:22–26. RGB does not appear to dispute that the terms are used synonymously.[5] The Court also agrees with the Defendants that "hardware independent" provides more guidance to a jury than does "abstract." Accordingly, the Court will employ the term that provides the most clarity to a jury.

Lastly, both parties' proposed constructions include examples of motion control operations. The Court finds these examples unnecessary and potentially distracting to a jury. At

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5. At the *Markman* hearing, RGB also stated that it was unopposed to the Court's preliminary construction, which used "hardware independent" instead of "abstract." See (Doc. No. 183, at 37–39.)

the *Markman* hearing, the Court notified the parties that it intended to leave out examples when defining the terms.   The parties did not object to this approach.   See (Doc. No. 183, at 37.)

2.   Court's Construction

In light of the claim language and specification, the Court construes **"motion control operations"** to mean "**hardware independent operations that are performed by a motion control device."**

C.   *"Primitive Operations" and "Non-Primitive Operations"*[6]

The RGB Patents disclose two categories of motion control operations: "primitive operations" and "non-primitive operations."   These two categories (and consequently, the terms' definitions) are mutually exclusive: a motion control operation is "either a primitive operation . . . or a non-primitive operation."   '236 Patent, claim 1.   These two terms also form the basis for the Defendants' Motion for Summary Judgment of Invalidity for Indefiniteness.   (Doc. No. 158.) The Defendants claim that the two terms are insolubly ambiguous because it is impossible to distinguish the boundary between a primitive operation and a non-primitive operation.   (Id. at 1.) Because the construction of these two terms is interrelated, the Court construes the terms together.

The parties agree on the following definition of primitive operations: "motion control operations, such as GET POSITION and MOVE RELATIVE, necessary for motion control, which cannot be simulated using a combination of other motion control operations."[7]   This language is taken directly from the specifications of the RGB Patents.   '058 Patent, 6:56–67; '236 Patent,

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6.   '236 Patent, claim 1; '058 Patent, claims 1, 3; '557 Patent, claims 16, 46; '543 Patent, claim 15.

7.   In *Fanuc*, as in this case, the parties agreed that primitive operations are necessary for motion control and cannot be simulated using a combination of other motion control operations.   Fanuc, No. 2:07-CV-418, 2009 U.S. Dist. LEXIS 127428, at *34–35 (E.D. Tex. Aug. 25, 2009).   The disagreement between the parties in that case was whether examples should be included.   Judge Folsom adopted RGB's definition, which is the same definition that the parties have agreed to in this case.   Id.

7:27–38; '557 Patent, 8:17–28; '543 Patent, 5:62 to 6:6. RGB contends that the patentee acted as a lexicographer by defining the term in the specification in this manner. (Doc. No. 151, at 11); (Doc. No. 183, at 56:10–22). The Defendants, while stating that they agree with this definition, argue that the term is indefinite because the RGB Patents fail to provide a standard for determining whether an operation is necessary for motion control and because MOVE RELATIVE can be simulated using a combination of other motion control operations. (Doc. No. 168, at 1–2.) RGB explains that "necessary for motion control" means required for any class of motion control devices. (Doc. No. 171, at 7.) RGB also argues that MOVE RELATIVE cannot be simulated using a combination of other motion control operations. (Id. at 8–10.)

Despite the fact that the parties have reached an agreed upon definition for primitive operations, the Court finds it necessary to construe this term. The reasons are threefold. First, the Court believes that the term carries a more simplified meaning than that proposed by the parties. Second, while the parties state that they agree on the construction of this term, the definition they propose results in numerous pages of summary judgment arguments on the meaning of that definition—demonstrating that the parties are not actually in agreement on the meaning of this term. Third, the Court finds that the correct definition of non-primitive operations relies on determining the correct definition of primitive operations.

For the term non-primitive operations, the parties offer the following:

Plaintiff's Proposed Construction	Defendants' Proposed Construction
"motion control operations that do not meet the definition of primitive operations"	This term is indefinite. To the extent the Court construes this term, it should be construed to mean, "motion control operation(s) that can be simulated using a combination of primitive operations."

RGB argues—as with the definition of primitive operations—that the patentee was acting as a lexicographer by stating in the specification that "[n]on-primitive operations are motion control

operations that do not meet the definition of a [sic] primitive operations." (Doc. No. 151, at 11) (citing '236 Patent, 7:35–37.) RGB explains that this definition, when viewed in light of the parties' agreed upon definition of primitive operations, includes both (1) motion control operation that can be simulated using a combination of other motion control operations, and (2) motion control operations that are not necessary for motion control *that cannot be simulated using a combination of primitive operations*. (Id. at 11–12.) In support of this definition, RGB states that Appendix A to the RGB Patents classifies certain motion control operations in the preferred embodiment as non-primitive specifically because they are not necessary for motion control. (Id. at 12, Ex. 10, at 3.2.10.) To illustrate its point, RGB includes the following table.

		Capable of Being Simulated	
		YES	NO
Necessary	NO	NON-PRIMITIVE	NON-PRIMITIVE
	YES	NON-PRIMITIVE	PRIMITIVE

RGB argues that the Defendants' definition fails because it excludes from the non-primitive category those motion control operations that are not necessary for motion control and cannot be simulated using other motion control operations (reflected in the shaded box in the table). (Id. at 12.) RGB also offers the expert report of David W. Brown—one of the inventors, as well as RGB's Chairman of the Board and Chief Technical Officer—to support its definition and clarify that "necessary for motion control" means required for any class of motion control devices. (Doc. No. 171, at 7.) At the *Markman* Hearing, RGB repeatedly referred to Brown's opinions in order to support its proposed construction.

The Defendants argue that the term non-primitive operations is indefinite for the same reasons that the term primitive operations is indefinite: primarily because they believe the RGB Patents fail to provide a standard for determining whether an operation is necessary for motion control. (Doc. No. 168, at 5–13.) In the alternative, the Defendants propose that the term be construed as motion control operations that can be simulated using a combination of primitive operations. Defendants note that their proposed definition mimics the language of several of the claims. (Doc. No. 157, at 8 n.5) ("nonprimitive operations that may be simulated using a combination of primitive operations" (quoting '058 Patent, claim 1), "a non-primitive motion operation that can be performed using a combination of primitive motion operations" (quoting '557 Patent, claim 46)).

The Defendants also argue that RGB's definition of "not necessary for motion control" is different from that contemplated by the RGB Patents. They contend that, to the extent that non-primitive operations are considered to be "not necessary for motion control," they are such because the system does not need them to reach the same result—the system may simply simulate them using a combination of primitive operations. (Id. at 8.) The Defendants state that Judge Folsom so equated "not necessary to perform motion control" and "can be simulated" in *Fanuc*. (Id.) ("In addition to GET POSITON [sic] and MOVE RELATIVE, motion control operations may also take the form of more complicated 'non-primitive' operations. Because the Patent suggests that non-primitive operations can be emulated using a series of primitive operations, however, not *all* motion control devices need perform both primitive and non-primitive operation[s] in order to function." (quoting Fanuc, No. 2:07-CV-418, 2009 U.S. Dist. LEXIS 127428, at *33 (E.D. Tex. Aug. 25, 2009)). Finally, the Defendants argue that RGB is incorrect in asserting that Appendix A to the RGB Patents provides any guidance on determining the

meaning of "necessary for motion control" or the meaning of the terms primitive operations and non-primitive operations. (Id. at 8–9.)

1. Analysis

    i. The Claims

Simply by reading the claims of the RGB Patents, it is clear that one skilled in the art would quickly understand the terms at issue to carry a plain and ordinary meaning: primitive operations are basic operations that cannot be simulated using a combination of other operations, and non-primitive operations are more complicated operations that can be simulated using a combination of other operations.

To begin with, the '058 Patent claims unequivocally describe non-primitive operations as "operations that may be simulated using a combination of primitive operations." '058 Patent, claims 1, 3. The '557 Patent claims do the same: "non-primitive motion operation that can be performed using a combination of primitive motion operations." '557 Patent, claim 46; see also id., claim 16 ("a non-primitive motion operation that can be performed using at least one primitive motion operation"). Therefore, the Court finds it necessary to construe the term as it is defined in the claims.[8]

Conversely, primitive operations are described in the '557 Patent claims as operations that "cannot be performed using a combination of primitive or non-primitive motion operations" '557 Patent, claim 46; see also id., claim 16 ("where the at least one primitive motion operation cannot

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8. E.g., TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc., 529 F.3d 1364, 1369 (Fed. Cir. 2008) ("The court noted that the claim expressly states: 'a telephone handset being a handle with an earpiece at one end and a mouthpiece at an opposite end.' Hence, the claim itself contains a precise definition of the term. By first looking to the claim language, the court recognized that 'the claims themselves provide substantial guidance as to the meaning of particular claim terms.' We find no error by the district court in relying heavily on the claim language to construe the claim term.") (internal citations omitted).

be performed using a combination of primitive or non-primitive motion operations"). The '236 Patent and the '543 Patent claims describe primitive operations in the same fashion. '236 Patent, claim 1 ("a primitive operation the implementation of which is required to operate motion control devices and cannot be simulated using other motion control operations"); '543 Patent, claim 15 ("a primitive operation the implementation of which is required to control the object and cannot be simulated using any other motion control operations"). As with non-primitive operations, the Court finds it necessary to construe primitive operations as it is defined in the claims.[9]

Based on the inverse meanings that the claims disclose for these two terms, as well as other language in the claims, one skilled in the art would also understand that the terms are mutually exclusive: a motion control operation is "either a primitive operation . . . or a non-primitive operation." '236 Patent, claim 1; see also id. ("a non-primitive operation that does not meet the definition of a primitive operation"); '543 Patent, claim 15 ("each motion control operation comprises either a primitive operation . . . or a non-primitive operation").

The Court recognizes that claim 1 of the 236 Patent describes primitive operations as "required to operate motion control devices" and claims 1 and 3 of the '058 Patent describe primitive operations as "necessary to define the desired motion sequence." However, the import of these statements is simply that primitive operations are "necessary" or "required" because they are basic motion control operations that motion control devices use in combination to accomplish more complicated, non-primitive operations—they are the basic building blocks of motion control operations so to speak. See Fanuc, No. 2:07-CV-418, 2009 U.S. Dist. LEXIS 127428, at *33 (E.D. Tex. Aug. 25, 2009) ("[M]otion control operations may also take the form of more complicated 'non-primitive' operations. Because the Patent suggests that non-primitive operations can be emulated using a series of primitive operations, however, not *all* motion control

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9. See supra note 8.

devices need perform both primitive and non-primitive operation[s] in order to function. Instead, the Patent suggests that all motion control devices need only utilize primitive operations."). In this sense, the "necessary" and "required" phraseology merely reiterates that primitive operations are basic operations that cannot be simulated using a combination of other operations. For this reason, it would be redundant and unnecessary to define primitive operations with a "necessary for motion control" element.

These statements in the claims also do not go so far as to describe primitive operations as necessary for motion control in that they are "required for any class of motion control devices" as RGB advocates. (Doc. No. 171, at 7.) Furthermore, the claims themselves give absolutely no indication that non-primitive operations are not necessary for motion control such that they are "bells and whistles" as RGB so strongly urges the Court to define the term. See (Doc. No. 171, at 6.) Most significantly, the Court notes that RGB's proposed definition for non-primitive operations—*by which some non-primitive operations actually "cannot be simulated"* (Doc. No. 151, at 12)—directly contradicts the claims themselves, which unequivocally describe non-primitive operations as "*operations that may be simulated using a combination of primitive operations.*" '058 Patent, claims 1, 3; see also '557 Patent, claim 46 ("non-primitive motion operation that can be performed using a combination of primitive motion operations"). Defining non-primitive operations as RGB proposes would require the Court to completely disregard, and effectively rewrite, the claims. See, e.g., Eng'g Corp. v. Bartell Indus., Inc., 299 F.3d 1336, 1349 (Fed. Cir. 2002) ("Allen argues that one of skill in the art would understand that the term 'perpendicular' in the claim should be read to mean 'parallel.' Allen stretches the law too far. It is not our function to rewrite claims . . . ."). For this reason alone, RGB's proposed definition for non-primitive operations must be rejected.

ii. The Specifications

The specifications of the RGB Patents describe primitive and non-primitive operations in a manner consistent with the plain and ordinary meaning disclosed in the claims. See Phillips v. AWH Corp., 415 F.3d 1303, 1321 (Fed. Cir. 2005) ("Properly viewed, the 'ordinary meaning' of a claim term is its meaning to the ordinary artisan after reading the entire patent."). The two operations are explained in a mutually exclusive fashion, with the distinction between them being that primitive operations cannot be simulated using a combination of other operations, and non-primitive operations can be simulated using a combination of other operations:

> Motion control operations may either be primitive operations or non-primitive operations. Primitive operations are operations that are necessary for motion control and cannot be simulated using a combination of other motion control operations. Examples of primitive operations include GET POSITION and MOVE RELATIVE, which are necessary for motion control and cannot be emulated using other motion control operations. Non-primitive operations are motion control operations that do not meet the definition of a [sic] primitive operations. Examples of non-primitive operations include CONTOUR MOVE, which may be emulated using a combination of primitive motion control operations.

'236 Patent, 7:27–38; '058 Patent, 6:56–67; '557 Patent, 8:17–28; '543 Patent, 5:62 to 6:6; see also '557 Patent, 4:17–22, 4:61–66 ("a non-primitive motion operation that can be performed using at least one primitive motion operation, where the at least one primitive motion operation cannot be performed using a combination of primitive or non-primitive motion operations"); id. at 5:37–42 ("a non-primitive motion operation that can be performed using a combination of primitive motion operations, where primitive motion operations cannot be performed using a combination of primitive or non-primitive motion operations").

The specifications do indeed state that "primitive operations are operations that are necessary for motion control" and that "non-primitive operations are motion control operations that do not meet the definition of a [sic] primitive operations." However, these two statements in

the specification are not an instance in which the patentee was acting as his own lexicographer as RGB argues. "When a patentee acts as his own lexicographer in *redefining* the meaning of particular claim terms *away from* their ordinary meaning, he must clearly express that intent in the written description." Merck & Co. v. Teva Pharms. USA, Inc., 395 F.3d 1364, 1370 (Fed. Cir. 2005) (emphasis added) (citing Bell Atl. Network Servs. v. Covad Commc'n Group, Inc., 262 F.3d 1258, 1268 (Fed. Cir. 2001)); see also Phillips v. AWH Corp., 415 F.3d 1303, 1316 (Fed. Cir. 2005) ("[T]he specification may reveal *a special definition* given to a claim term by the patentee *that differs from the meaning it would otherwise possess.*" (emphasis added)). "[T]he statement in the specification must have sufficient clarity to put one reasonably skilled in the art on notice that the inventor intended to *redefine* the claim term." Merck, 395 F.3d at 1370.

Here, the specification does not clearly express an intent to redefine the terms. This portion of the specification simply explains how a software system designer will define the set of motion control operations. '236 Patent, 7:19–22 ("The software system designer develops the software system 22. The software system designer initially defines a set of motion control operations that are used to perform motion control."). In doing so, the specification tracks the claim terms in explaining that primitive operations are those that cannot be simulated using a combination of other operations, and non-primitive operations are those that can be simulated using a combination of other operations—it does not redefine these terms away from their plain and ordinary meaning as disclosed in the claims. Likewise, as made clear by the parties' protracted arguments over what "necessary for motion control" might mean, the specification does not "have sufficient clarity to put one reasonably skilled in the art on notice that the inventor intended to redefine the claim term[s]" to include a necessary/not necessary for motion control element. Merck & Co., 395 F.3d at 370 (citing Bell Atl. Network Servs., 262 F.3d at 1268. If the

patentee intended for this portion of the specification to serve a definitional function, he should have clearly expressed his intent to do so and he should have performed this task with such clarity that it would be clear what was meant by "necessary for motion control." This is particularly the case in regards to RGB's proposition that some non-primitive operations actually "cannot be simulated." (Doc. No. 171, at 6.) Since the claim terms state the opposite, the patentee would have to speak with extreme clarity in order to convey this definition; that task is not performed by simply stating that "primitive operations are operations that are necessary for motion control" and that "non-primitive operations are motion control operations that do not meet the definition of a [sic] primitive operations."

Furthermore, assuming *arguendo* that the patentee could be viewed as acting as his own lexicographer in this instance, the resulting definition would not take the form that RGB proposes. The specification does not state that "necessary for motion control" means that primitive operations are "required for any class of motion control devices" (Doc. No. 171, at 7), that non-primitive operations are "bells and whistles" such that they are not necessary for motion control (Doc. No. 151, at 12), or that some non-primitive operations actually "cannot be simulated" (Doc. No. 171, at 6). RGB only arrives at these definitions through much attorney argument bolstered by the self-serving statements of David W. Brown, one of the inventors and RGB's Chairman of the Board. Instead of RGB's proposed definition, the natural import of stating that primitive operations are "necessary for motion control" is that these operations cannot be simulated and thus are the basic building blocks of motion control operations (as with the "necessary" and "required" phraseology in some of the claims).[10] Likewise, the natural import of the statement in the specification that "non-primitive operations are motion control operations that

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10. See supra Part IV.C.1.ii (examining the claims for the meaning of primitive operations and non-primitive operations).

do not meet the definition of a primitive operations" is that these operations can be simulated using a combination of other operations, as exemplified in the sentence immediately following this statement and as explicitly stated in the claims. <u>See</u> '236 Patent, 7:34–38 ("Non-primitive operations are motion control operations that do not meet the definition of a primitive operations. Examples of non-primitive operations include CONTOUR MOVE, *which may be emulated using a combination of primitive motion control operations.* (emphasis added)); '058 Patent, claims 1, 3 ("nonprimitive operations that may be simulated using a combination of primitive operations").

Finally, to support its position that the term non-primitive operations includes some operations that cannot be simulated and are not necessary for motion control, RGB refers to Appendix A to the RGB patents. <u>See</u> (Doc. No. 151, at 12, Ex. 10, at 3.2.10.) Appendix A, Section 3.2.10, includes a list of extended driver functions (corresponding to non-primitive operations) that are described as "extra motion control functions that may or may not be implemented by the motion control hardware." (<u>Id.</u>) RGB contends that this sentence and list of functions in Appendix A demonstrates that some driver functions are non-primitive because they are not necessary for motion control. The Court agrees with the Defendants that this sentence in Appendix A provides "no such guidance." (Doc. No. 157, at 8.) Simply stating in an Appendix that certain functions "may or may not be implemented" is not of sufficient clarity to put one skilled in the art on notice that the patentee is serving as his own lexicographer. <u>Merck & Co. v. Teva Pharms. USA, Inc.</u>, 395 F.3d 1364, 1370 (Fed. Cir. 2005). Furthermore, whether an operation "may or may not be implemented by the motion control hardware" is not a distinction between primitive and non-primitive operations: RGB itself admits that some *primitive operations* may not be implemented by all motion control devices. <u>See</u> (Doc. No. 167, at 4–5); (Doc. No. 171, at 6–8).

iii. The Extrinsic Evidence

Both parties seem to suggest that the terms primitive operations and non-primitive are coined terms.   Neither references a dictionary for the definition of "primitive" and compares that definition to the way the term is used in the RGB Patents.   However, reference to both general use and technical dictionaries confirms the plain and ordinary meaning of the terms at issue as revealed in the claims and specifications of the RGB Patents.   See Phillips v. AWH Corp., 415 F.3d 1303, 1322 (Fed. Cir. 2005) ("Dictionaries or comparable sources are often useful to assist in understanding the commonly understood meaning of words and have been used both by our court and the Supreme Court in claim interpretation.").

The definition of primitive from general use dictionaries is "not derived." MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 986 (11th ed. 2007); see also WEBSTER'S II NEW RIVERSIDE UNIVERSITY DICTIONARY 934 (1988) ("Serving as the source for derived or inflected forms."). Webster's II New Riverside University Dictionary also gives a similar definition of "primitive" that it labels as specific to the field of computer science: "A basic or fundamental unit of machine instruction or translation."   WEBSTER'S II NEW RIVERSIDE UNIVERSITY DICTIONARY 935 (1988).   These definitions are congruent with the meaning of the term in the RGB Patents, which describe primitive operations as basic operations that cannot be simulated using other operations and non-primitive operations as more complex operations that can be simulated using a combination of other operations.

Even more enlightening is the definition of primitive listed in a technical dictionary: "In computer programming, a basic element, such as an operation, which can be combined with others for more sophisticated operations."   WILEY ELECTRICAL AND ELECTRONICS ENGINEERING DICTIONARY 603 (Steven M. Kaplan ed., IEEE Press 2004);   see also THE IEEE STANDARD

DICTIONARY OF ELECTRICAL AND ELECTRONICS TERMS 817 (Institute of Electrical and Electronics Engineers, Inc., 6th ed. 1996) ("A basic or fundamental unit, often referring to the lowest level of machine instruction or the lowest unit of a language."). This definition is identical to the way the term is used in the RGB Patents: primitive operations are basic operations that can be combined to perform more sophisticated, non-primitive operations.

To be clear, the Court is not relying on dictionaries to construe the terms at issue. The claims of the RGB Patents disclose the meanings of those terms and the specifications reiterate those meanings. However, the dictionary definition of primitive is the same as that used in the RGB Patents. In other words, the patentee did not act as his own lexicographer by giving the terms primitive operations and non-primitive operations novel or coined meanings—the patentee used the dictionary definitions of these terms. Reference to these dictionaries simply reinforces the Court's construction of the terms after reading the claims and specification.

2. Court's Construction

In light of the claim language, specification, and extrinsic evidence, the Court construes **"primitive operation"** to mean **"motion control operations that cannot be simulated using a combination of other motion control operations,"** and **"non-primitive operations"** to mean **"motion control operations that can be simulated using a combination of other motion control operations."** As will be stated more fully in a report and recommendation that the undersigned will enter separately, the terms are not indefinite. See Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1375 (Fed. Cir. 2001) ("If the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree," the claim is sufficiently clear to avoid invalidity on indefiniteness grounds.).

D. "Motion Control Device"[11]

Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a device comprising a controller and a mechanical system" or, alternatively, "a device comprising a controller and a mechanical system capable of generating movement based on a control signal"	"a controller and mechanical system for performing motion control"

The parties agree that a motion control device is comprised of a controller and a mechanical system. Their disagreement is on whether the capabilities or purposes of a motion control device should be included in the definition, and what those capabilities or purposes are.

RGB would prefer that the term simply be defined as "a device comprising a controller and a mechanical system." But RGB proposes the following modifying phrase in case the Court finds further defining necessary: "capable of generating movement based on a control signal." (Doc. No. 151, at 13.)

The Defendants argue that RGB's definitions are incomplete and overly broad unless they include a requirement that the device is used "for performing motion control," with motion control defined as moving an object in a desired manner. (Doc. No. 157, at 10.) They contend that without this clarification, the term would cover any mechanical system, including robots and printers, which RGB stated were not motion control devices during reexamination of the '236 Patent. (Doc. No. 157, at 10, Ex. D, at 17.)

In response, RGB does not adequately explain *why* the Defendants' definition is incorrect. They simply describe it as "improperly narrow," argue that that the Defendants are reading the prosecution history out of context, and contend that they did not disclaim *all* robots during reexamination. (Doc. No. 167, at 5.)

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11. '236 Patent, claim 1, 10; '543 Patent, claims 5–7, 11, 13; '557 Patent, claims 16, 20, 24.

1. Analysis

The claim language itself provides guidance on the meaning of "motion control device":

[E]ach of the motion control devices comprises
>   *a controller* capable of generating electrical signals based on at least one
>   control command of the controller language associated with the motion
>   control device, and
>   *a mechanical system* capable of causing a motion control operation based
>   on electrical signals generated by the controller, . . .

'543 Patent, claim 5. This supports the parties' conclusion that a motion control device is a device comprising "a controller and a mechanical system."

Additionally, the specification provides a more detailed description of a motion control device:

>   The purpose of a motion control device is to move an object in a desired manner.
>   The basic components of a motion control device are a controller and a mechanical
>   system. The mechanical system translates signals generated by the controller into
>   movement of an object.

'236 Patent, 1:18–22. The specification confirms that a motion control device is comprised of a controller and a mechanical system. The specification also explains what a motion control device is capable of doing—moving an object in a desired manner.

Therefore, from the claim language and specification it becomes clear that a motion control device is "a device comprising a controller and a mechanical system capable of moving an object in a desired manner." At the *Markman* hearing, the Court presented this definition to the parties as a preliminary construction. The Defendants suggested that instead of using "capable of" the Court use "for" in order to convey the intended use of a motion control device. However, the Court declines this suggestion because it would result in incorrectly defining the device in terms of its intended use, instead of in terms of what the device actually *is*. See Paragon Solutions, LLC v. Timex Corp., 566 F.3d 1075, 1090 (Fed. Cir. 2009) ("'[A]pparatus claims cover what a device is,

not what a device does.' If the district court's construction were correct, then the same apparatus might infringe when used in one activity, but not infringe when used in another." (quoting Hewlett-Packard Co. v. Bausch & Lomb, Inc., 909 F.2d 1464, 1468 (Fed. Cir. 1990))).

2. Court's Construction

In light of the claim language and specification,[12] the Court construes **"motion control device"** to mean **"a device comprising a controller and a mechanical system capable of moving an object in a desired manner."**

E. *"Application Program"*[13]

Plaintiff's Proposed Construction	Defendants' Proposed Construction
"a software program designed to handle specific tasks"	"a software program that directly controls each motor using base incremental steps"

In *Fanuc*, Judge Folsom found the term "application program" to carry its plain and ordinary meaning within the RGB Patents, which he held was "a software program designed to handle specific tasks." Fanuc, No. 2:07-CV-418, 2009 U.S. Dist. LEXIS 127428, at *12–16 (E.D. Tex. Aug. 25, 2009). RGB urges the Court to follow Judge Folsom's lead and construe the term in the same manner. (Doc. No. 151, at 14–15.) It cites technical dictionaries that support this general definition, as well as an example in the specification that arguably uses the term in a generic manner. (Id. at 14) (citing '236 Patent, 8:30–33) ("any application that uses the system 22 by programming the motion control component 35"). RGB argues that nothing in the claims,

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12. While the parties cite the prosecution history to support their own constructions, the Court finds that the cited portions of the prosecution history are unhelpful in determining the meaning of this term. They certainly do not contradict the Court's construction of the term.

13. '236 Patent, claims 1, 7, 10; 058 Patent, claims 1–5; '557 Patent, claims 5, 16, 20, 35, 46, 50; '543 Patent, claims 1, 3, 8, 13.

specifications, or prosecution history suggest that the term carries a different meaning within the RGB Patents.

The Defendants contend that through distinguishing prior art in the specification, the patentee limited the term application program to a software program that controls hardware "in base incremental steps." (Doc. No. 157, at 12) (citing '236 Patent, 3:1–17). They similarly argue that during reexamination, RGB disavowed the definition that it now seeks when it distinguished prior art. (Id. at 12–15) (citing numerous statements in the prosecution history.)

1. Analysis

Courts generally give claim terms their ordinary and customary meaning. Phillips v. AWH Corp., 415 F.3d 1303, 1312–13 (Fed. Cir. 2005). The Court agrees with RGB that as used in the RGB Patents the term has a plain and ordinary meaning of "a software program designed to handle specific tasks." See Fanuc, 2009 U.S. Dist. LEXIS 127428, at *12–16. Application program is used throughout the claims of the RGB Patents, and a review of the claims does not indicate that the term carries anything other than this plain and ordinary meaning.[14] Likewise, the

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14. See, e.g., '236 Patent, claim 1 ("an **application program** comprising a series of component functions, where the **application program** defines the steps for operating a motion control device in a desired manner"); 058 Patent, claim 1 ("A system for allowing an **application program** to communicate with any one of a group of supported hardware devices . . . the software system comprising at least one **application program** comprising a set of component functions defining a desired motion sequence . . . ."); id. at claim 3 ("A system for allowing an **application program** to communicate with any one of a group of supported hardware devices, the system comprising: a software system comprising at least one **application program** operating on a first workstation, the **application program** comprising a set of component functions defining a desired motion sequence . . . ."); '557 Patent, claim 16 ("A motion control system, comprising: an **application program** comprising at least one call to at least one component function . . . ."); id. at claim 20 ("A motion control system as recited in claim 16, in which the **application program** further comprises at least one call to a component function comprising at least one parameter . . . ."); '543 Patent, claim 1 ("generating a control command based on an **application program** and the driver code of the selected software driver"); id. at claim 3 ("The method of claim 2, wherein the **application program** comprises a sequence of component functions, and at least some of the component functions are associated with driver functions."); id. at claim 13 ("providing an **application program** comprising a series of component functions").

term is used throughout the specification, and a review of its use there does not indicate that the

patentee intended to give it a more specific meaning.[15]

The Defendants fail to show where the patentee clearly redefines the term to a narrower

meaning.[16] The portion of the specification cited by the Defendants describes the inability of

prior art printers to be controlled directly from a word processing application program:

> The Applicants are also aware of the common programming practice in
> which drivers are provided for hardware such as printers or the like; an application
> program such as a word processor allows a user to select a driver associated with a
> given printer to allow the application program to print on that given printer.
> While this approach does isolates [sic] the application programmer from the
> complexities of programming to each hardware configuration in existence, this
> approach does not provide the application programmer with the ability to control
> the hardware in base incremental steps. In the printer example, an application
> programmer will not be able to control each stepper motor in the printer using the
> provided printer driver; instead, the printer driver will control a number of stepper
> motors in the printer in a predetermined sequence as necessary to implement a
> group of high level commands.
> The software driver model currently used for printers and the like is thus not
> applicable to the development of a sequence of control commands for motion
> control devices.

'236 Patent, 3:1–21. What the specification does is distinguish the claimed invention from word

processers that allow a user to print to a given printer through the selection of the driver for that

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printer.   It does not redefine what is normally meant by "application program" as being a task

oriented software program.

The ability of the application program to do what the prior art could not arises from the

limitations set forth in the claims themselves.   For example, claim 1 of the '058 patent recites:

> A system for allowing an application program to communicate with any one of a group of supported hardware devices, the system comprising:
> > a software system operating on at least one workstation, the software system comprising
> > > at least one application program comprising a set of component functions defining a desired motion sequence, the desired motion sequence being comprised of primitive operations that are necessary to define the desired motion sequence and non-primitive operations that may be simulated using a combination of primitive operations,
> > > a core set of core driver functions, where each core driver function is associated with one of the primitive operations,
> > > an extended set of extended driver functions, where each extended driver functions is associated with one of the non-primitive operations,
> > > component code associated with each of the component functions, where the component code associates at least some of the component functions with at least some of the driver functions,
> > > a set of software drivers, where each software driver is associated with one of the hardware devices and comprises driver code for implementing the driver functions, and
> > > a control command generating module for generating control commands based on the component functions of the application program, the component code associated with the component functions, and the driver code associated with the software drivers; and
> > a network communication protocol that allows the control commands to be communicated from the control command generating module on the at least one workstation to at least one of the supported hardware devices over a network.

'085 Patent, claim 1.   The claim limitations specify the application program to comprise a set of

component functions defining a desired motion sequence, including primitive and non-primitive

operations.   This structure affords the application program the ability to control motion control

devices in base incremental steps.   Distinguishing the invention from the prior art on this basis is

not a redefinition of the term application program within the specification.

The prosecution history remarks echo the same thing.   While distinguishing the prior art

during reexamination, RGB argued that the claimed invention, unlike the prior art, *enabled* an

application program to control devices in base incremental steps:

> In contrast, the '058 describes an application program comprising a series of motion control operations, which the system then transforms into control commands which cause a controller to manipulate motors on a machine.   In other words, in the '058 as claimed, the application program can directly control each motor using base incremental steps, whereas in Sorensen, the application does not control motors at all, but instead lets the robot control its own motors however it sees fit in order to accomplish or implement the high level task based commands.

(Doc. No. 157, Ex. A, at 10.)   See also (Doc. No. 157, at 12–13) (citing various portions of the

prosecution history).   However, in doing so, RGB did not distinguish the prior art *on the basis*

that it did not employ an application program,[17] such that the plain and ordinary meaning of that

term would be disclaimed.   Cf. Eolas Techs., Inc. v. Microsoft Corp., 399 F.3d 1325, 1337–38

(Fed. Cir. 2005) ("While the applicants included language about library routines and DLLs in their

response [to the patent examiner], they did not distinguish the '906 invention based on these

features, rather such features were merely included in language that outlined Khoyi's operation.").

2.   Court's Construction

In light of the claim language, specification, and prosecution history, the Court construes

"application program" to mean **"a software program designed to handle specific tasks."**

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17.   As RGB points out, the portion of the prosecution history that the Defendants primarily cite is followed by a statement that outlines the five grounds on which the prior art can be distinguished; none of these grounds is the application program term itself.   See (Doc. No. 157, Ex. A, at 11–12.)

F. "Driver Functions"[18]

Plaintiff's Proposed Construction	Defendants' Proposed Construction
"hardware independent abstract functions that are separate and distinct from the component functions"	"hardware independent functions that are separate and distinct from, and located in a different layer from, the component functions"

The parties dispute whether "driver functions" should be defined as functions that are "located in a different layer from" component functions and also whether "driver functions" should be defined as both "hardware independent" and "abstract" functions.

RGB explains that in its preferred embodiment, driver functions exist *both* on a different layer from the component functions and on the same layer as component functions. (Doc. No. 151, at 17–18.) The driver functions exist on a software layer that the component functions are not found on—the drivers. Likewise, the component functions exist on a software layer that the driver functions are not found on—the application program. However, RGB argues, the driver functions and component functions also both exist on the same layer—the motion control component. Id. Because driver functions are found on both the same and different layers from the component functions, RGB suggests that the Defendants definition would unnecessarily confuse a jury. For this reason, it requests that the Court not include "and located in a different layer from" in the definition of driver functions. RGB also requests that the Court define the term using the phrase "hardware independent abstract functions" because that is the how it described the term during reexamination. (Doc. No. 151, at 19, Ex. 25, at 8.)

The Defendants point out that during reexamination, RGB described driver functions as being located on separate and distinct layer from the component functions. Defendants argue that RGB should not now be allowed to define the term otherwise. (Doc. No. 157, at 17–19.) The Defendants also contend that nothing in the patents suggest that the driver functions exist on the

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18. '236 Patent, claims 1–6, 10; '058 Patent, claims 1, 3, 4; '557 Patent, claims 16–19, 29, 46–49; '543 Patent, claims 2–4, 6–8, 14–16.

motion control component and thus on the same layer as component functions. (Id. at 19.)

Regarding "hardware independent abstract functions," the Defendants refer the Court to their

arguments on this point regarding the term "motion control operations." See (Doc. No. 157, at 7,

24.)

1. Analysis

By reading the claim terms themselves, one skilled in the art would understand driver

functions to be functions that are separate and distinct from both component functions and motion

control operations, but that are associated with both component functions and motion control

operations:

> A system for generating a sequence of control commands for controlling a selected
> motion control device selected from a group of supported motion control devices,
> comprising:
>> a set of motion control operations, where each motion control operation is
>> either a primitive operation the implementation of which is required to
>> operate motion control devices and cannot be simulated using other
>> motion control operations or a non-primitive operation that does not meet
>> the definition of a primitive operation;
>> a core set of core **driver functions**, *where each core **driver function** is
>> associated with one of the primitive operations*;
>> an extended set of extended **driver functions**, *where each extended **driver
>> function** is associated with one of the non-primitive operations*;
>> *a set of component functions;*
>> component code associated with each of the component functions, *where
>> the component code associates at least some of the component functions
>> with at least some of the driver functions . . . .*

'236 Patent, claim 1. The specification confirms what is evident from the claims themselves.

See id. at 7:43–46 (describing driver functions as separate and distinct from, but associated with,

motion control operations); id. at 7:56–59 (describing driver functions as separate and distinct

from, but associated with, component functions). The specification also explains that driver

functions are like motion control operations, construed *supra*, in that they are abstract or hardware

independent. See id. at 7:22–26 ("The motion control operations are not specifically related to
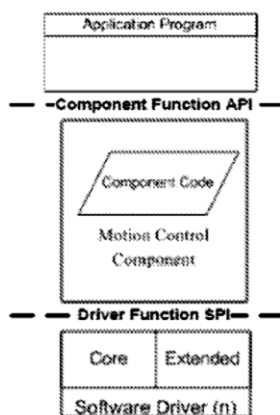
any particular motion control device hardware configuration, but are instead abstract operations . . . .”); id. at 7:46–51 (“As with motion control operations, driver functions are not related to a specific hardware configuration . . . .”). The parties are therefore correct on the portions of their constructions in which they agree.

As for whether “abstract” should be included within the definition, the Court finds that the same reasoning as stated above for “motion control operations” applies here. The two terms are used synonymously within the specification. Because “hardware independent” provides more guidance to a jury than does “abstract,” the Court will employ hardware independent only.

The primary issue though is whether driver functions should be defined as functions that are located in a different layer from the component functions. To begin with, there is no indication in the claim terms themselves that driver functions exist *only* on a separate software layer from the component functions. Moving to the specification, the parties agree that driver functions are described as existing on different layers within RGB’s preferred embodiment. But that alone is insufficient to allow the Court to limit the term in the manner that the Defendants request. Comark Commc’ns, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed. Cir. 1998) (“particular embodiments and examples appearing in the specification will not generally be read into the claims” (quoting Constant v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 1571 (Fed. Cir. 1988)) (internal quotation marks omitted)).

The Defendants propose that the SPI and API interfaces (comprising driver functions and component functions, respectively) are separate layers as shown by the specification, and thus the driver functions and component functions are described in the specification as existing on separate layers. (Doc. No. 157, at 17–18) (citing ‘543 Patent, 6:8–24). The Defendants go on to state that RGB clarified during reexamination that the API and SPI are separate and distinct layers. (id. at

18 and Ex. I.) But the portion of the specification that the Defendants cite does not state or imply that the SPI and API are separate software layers. The inference to be drawn from the specification is, instead, that the SPI and API are in fact "interfaces" that allow for communication between the application program, motion control component, and drivers. This understanding of the interfaces is reflected in the portions of the prosecution history that the Defendants cite. See (id. Ex. I, at 12–13.) There, RGB identified the API and SPI as two interfaces and showed them as such in the diagram reproduced here.

Application Program

— —Component Function API —

Component Code

Motion Control
Component

— — Driver Function SPI— —

| Core | Extended |

Software Driver (n)

(Id. at 12.) As shown in the diagram, the API and SPI interfaces sit between layers in the software system; the interfaces are not themselves "layers" despite a misnomer reference to "layers" in the prosecution history. Furthermore, as stated above, even if RGB's preferred embodiment is correctly described as having separate API and SPI interfaces which are to be understood as "layers," that does not mean that an interface or layer limitation should be read into the claims when one otherwise cannot be found there. See Comark Commc'ns, Inc., 156 F.3d at 1187.

Finally, the undersigned finds compelling RGB's argument and supporting evidence that in the preferred embodiment the driver functions also exist on the same software layer—namely the motion control component. See (Doc. No. 151, at 17–18) (citing '236 Patent, 7:54–56, 9:29–33, 10:40–43, and Figure 2); see also (Defendants' *Markman* Brief, Doc. No. 157, at 15–16) (describing the component code, which resides in the motion control component, as converting

component functions into driver functions). If this is the case, as it appears to be, the driver

functions exist *both* on a different layer from the component functions and on the same layer as

component functions.   Telling a jury that driver functions are located on a different layer from the

component functions unnecessarily runs the risk of confusing the jury.

2.   Court's Construction

In light of the claim language, specification, and prosecution history, the Court construes

"driver functions" to mean **"hardware independent functions that are separate and distinct**

from the component functions."

G.   *"Core Driver Function"*[19] *and "Extended Driver Function"*[20]

Terms	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"core driver function"	"a driver function associated with one or more primitive operations"	"a driver function that identifies one of the primitive motion control operations"
"extended driver function"	"a driver function associated with one or more non-primitive operations"	"a driver function that identifies one of the non-primitive motion control operations"

The parties briefed and argued these terms together because their disputes apply equally to

both terms.   The issues presented by the parties are whether the driver functions are "associated

with" or "identify" motion control operations and whether they do so on a one-to-one or

one-to-many basis.

RGB states that the patents clearly teach that the driver functions "associate with" motion

control operations.   (Doc. No. 151, at 20) (citing 236 Patent, 7:44–46, 8:10–14, 48:22–27).   As to

the second issue, RGB argues that the use of "a" and "one" in the patents should be interpreted as

_____

19.   '236 Patent, claims 1–2, 4–6; '058 Patent, claims 1, 3; '557 Patent, claims 16–19, 46–49; '543 Patent, claim 15.

20.   '236 Patent, claims 1, 3–6; '058 Patent, claims 1, 3; '557 Patent, claims 16, 18, 19, 46, 48, 49; '543 Patent, claim 15.

meaning "one or more." (Doc. No. 151, at 20–21) (citing <u>Accent Packaging, Inc. v. Leggett &</u>
<u>Platt, Inc.</u>, 707 F.3d 1318, 1326 (Fed. Cir. 2013)).

The Defendants respond that "associates with" is unclear and insufficiently describes the
relationship between driver functions and motion control operations. (Doc. No. 157, at 20.)
They contend that the term "identifies" more clearly and accurately describes the relationship, and
they point to instances in the prosecution history in which RGB used "identifies" to describe the
relationship. (<u>Id.</u> at 20–21, Ex. A, at 3, 8, Ex. P, at 2, Ex. Q, at 4.) For the second
issue—whether "a" and "one" mean one or more in the patents—the Defendants disagree with
RGB's characterization of the case law. (<u>Id.</u> at 21–22) (citing <u>Harari v. Lee</u>, 656 F.3d 1331,
1341–42 (Fed. Cir. 2011), <u>Insituform Techs. v. Cat Contr.</u>, 99 F.3d 1098, 1105–06 (Fed. Cir.
1996), and <u>Tulip Computer Int'l B.V. v. Dell Computer Corp.</u>, 236 F. Supp. 2d 364, 397–99 (D.
Del. 2002)).

1. Analysis

The claim terms unambiguously state that "each core driver function is associated with one
of the primitive operations" and "each extended driver function is associated with one of the
non-primitive operations." '236 Patent, claim 1; '058 Patent, claims 1, 3; '543 Patent, claim 15.
The Defendants request that the Court employ "that identifies" instead of the words used in the
claim. Likewise, RGB requests that the Court employ "one or more" instead of the words used in
the claim. The Court finds that the meaning of the claim terms is clear and that there is no basis
for employing the modifications that the parties request.

Regarding the Defendants' request, there is no support in the claims for defining a driver
function as something that performs the operation or action of identifying a motion control
operation. Instead, the claims specifically state that a driver function is already associated with

(i.e., paired or matched with) a motion control operation. See '236 Patent, claim 1; '058 Patent, claims 1, 3; '543 Patent, claim 15, '557 Patent, claim 16. Like the claims, the specification clearly states that a driver function is "associated with" a motion control operation. '236 Patent, 7:44–46. The specification also suggests that when designing the system, a software designer predetermines which driver function is associated with which motion control operation:

> The software system designer develops the software system 22. The software system designer initially defines a set of motion control operations that are used to perform motion control. . . .
> Given the set of motion control operations as defined above, the software system designer next defines a service provider interface (SPI) comprising a number of driver functions. Driver functions may be either core driver functions or extended driver functions. Core driver functions are associated with primitive operations, while extended driver functions are associated with non-primitive operations.

Id. at 7:19–46. The portions of the prosecution history that the Defendants cite also do not support defining the term as the Defendants request. While in one instance RGB describes a core driver function as identifying a motion control operation, RGB is using the terms "associate" and "identify" interchangeably during this isolated portion of the prosecution history. See (Doc. No. 157, Ex. A, at 7–8.) Additionally, in concluding the portion of prosecution history that the Defendants cite, RGB recaps that "one of skill in the art would necessarily conclude that . . . driver functions are hardware independent abstract functions that are associated with primitive or non-primitive motion control operations . . . ." (Id. at 8.) Therefore, the undersigned finds no support for diverting from the plain language used in the claims as the Defendants request.

In the same manner, RGB is unable to garner support for its requested definition from the claim language, specification, or prosecution history. There is no suggestion in the claims that individual driver functions are associated with more than one motion control operation as RGB would have the Court so define the term. In fact, the claims suggest the opposite by explicitly

stating that "each" driver function "is associated *with one of the*" motion control operations. '236 Patent, claim 1 ("each core driver function is associated *with one of the* primitive operations . . . each extended driver function is associated *with one of the* non-primitive operations") (emphasis added); '058 Patent, claims 1, 3 (same); '543 Patent, claim 15 (same); see, e.g., WMS Gaming Inc. v. Int'l Game Tech., 184 F.3d 1339, 1350 (Fed. Cir. 1999) ("The plain meaning of 'selecting one of said . . . numbers' is selecting a single number, not a combination of numbers." (citing Insituform Techs., Inc. v. Cat Contracting, Inc., 99 F.3d 1098, 1105 (Fed. Cir. 1996))). The '557 Patent makes it even clearer that the relationship is one-to-one by specifying that a core driver function "is associated with *a single one* of the primitive motion operations." '557 Patent, claim 46 (emphasis added). A further reading of the claims as a whole also supports the one-to-one definition: in regards to other terms, the patentee specifically claims a one-to-many relationship by using the language "at least one" and "plurality." See, e.g., '557 Patent, claim 16 ("a plurality of unique controller languages *are associated with the plurality* of motion control devices") (emphasis added); id. ("each software driver *is associated with at least one of the plurality* of controller languages") (emphasis added); id. ("the driver code of *at least one* software driver *associates at least one* driver function with *at least one* control command of the *at least one* controller language *associated with at least one* of the software drivers, and *at least one* selected software driver *is associated with at least one* selected motion control device . . . the component code *associates at least one* of the component functions with *at least one* of the driver functions") (emphasis added); see also '557 Patent, claims 17–19, 47, 48 (using the same language). That the patentee clearly specified a one-to-many relationship in regards to other terms reinforces the understanding that only a one-to-one relationship was claimed in regards to the "driver function" term. See Harari v. Lee, 656 F.3d 1331, 1341 (Fed. Cir. 2011) (noting that a patentee's use of

both singular and plural language in claims suggested that singular language carried only a singular meaning). If RGB had intended to claim a one-to-many relationship between driver functions and motion control operations, it would have used the phrase "at least one."

The Court also briefly notes that it has not unearthed—and RGB has not directed the Court's attention to—anything in the specification or prosecution history that would indicate that the association between driver functions and motion control operations is one-to-many.

Despite the clarity of the claim language and absence of a contrary indication in the specification or prosecution history, RGB argues that the Court should adopt its definition because Federal Circuit precedent establishes (1) that "a" means "one or more" and, (2) that "one" also means "one or more." See (Doc. No. 151, at 20–21) (citing Accent Packaging, Inc. v. Leggett & Platt, Inc., 707 F.3d 1318, 1326 (Fed. Cir. 2013)). Regarding the former, RGB refers to the following principle: "an indefinite article 'a' or 'an' in patent parlance carries the meaning of 'one or more' in open-ended claims containing the transitional phrase 'comprising.'" Baldwin Graphic Sys., Inc. v. Siebert, Inc., 512 F.3d 1338, 1342 (Fed. Cir. 2008) (quoting KCJ Corp. v. Kinetic Concepts, Inc., 223 F.3d 1351, 1356 (Fed. Cir. 2000)) (internal quotation marks omitted). However, this principle does not command the definition that RGB seeks.

First, three of the RGB patents do not use "a" or "an" at all; they instead clearly state that "each core driver function is associated with one of the primitive operations" and "each extended driver function is associated with one of the non-primitive operations." '236 Patent, claim 1; '058 Patent, claims 1, 3; '543 Patent, claim 15. The fourth RGB Patent, the '557 Patent, uses different language than the other three and does employ the indefinite article "a." '557 Patent, claim 16 ("at least one driver function is an extended driver function that is associated with a non-primitive motion operation . . . at least one driver function is a core driver function that is associated with a

primitive motion operation"). The principle cited above, though, "does not set a hard and fast rule that 'a' always means one or more than one. Instead, [courts] read the limitation in light of the claim and specification to discern its meaning." Harari v. Lee, 656 F.3d 1331, 1341 (Fed. Cir. 2011) (citing Insituform Techs., Inc. v. Cat Contracting, Inc., 99 F.3d 1098, 1105–06 (Fed. Cir. 1996)). "When the claim language and specification indicate that 'a' means one and only one, it is appropriate to construe it as such even in the context of an open-ended 'comprising' claim." Id. As described above, when the "driver function" limitation is read in light of the claims as a whole and the specification, the conclusion to be drawn is that (despite the use of "a") there is only a one-to-one association between driver functions and motion control operations. See, e.g., id. (reaching a similar conclusion based on the claim language and specification); AbTox Inc. v. Exitron Corp., 122 F.3d 1019, 1024 (Fed. Cir. 1997) (same); Insituform Techs., 99 F.3d at 1105 (same). In the '557 Patent in particular, the patentee specifically claimed—within the same claim—one-to-many associations in regards to other terms, but did not do so with regard to the "driver function" terms. See generally '557 Patent, claim 16. The '557 Patent also states, within claim 46, that a core driver function "is associated with *a single one* of the primitive motion operations." '557 Patent, claim 46 (emphasis added).

Second, *Accent Packaging* does not hold that "one" means "one or more" as RGB suggests. See Accent Packaging, Inc. v. Leggett & Platt, Inc., 707 F.3d 1318 (Fed. Cir. 2013). Instead, the result in that case was the product of the Federal Circuit reading the claims in light of the specification, which included a preferred embodiment demonstrating a pairing of one-to-many. Id. at 1325–26. The Federal Circuit noted that the use of "one" in the claims suggested a one-to-one pairing, but based on the preferred embodiment it did not employ such a definition because "a claim interpretation that excludes a preferred embodiment from the scope of the claim

is rarely, if ever, correct." Id. at 1326 (quoting On-Line Techs., Inc. v. Bodenseewerk Perkin-Elmer GmbH, 386 F.3d 1133, 1138 (Fed. Cir. 2004)) (internal quotation marks omitted). In the instant case, the claim language describes a one-to-one association, and unlike in *Accent Packaging*, the preferred embodiment does not demonstrate a one-to-many relationship that must be accounted for when defining the term.[21]

2. Court's Construction

In light of the claim language and specification, the Court construes **"core driver function"** to mean **"a driver function associated with one of the primitive motion control operations"** and **"extended driver function"** to mean "**a driver function associated with one of the non-primitive motion control operations."**

H. *"Network"*[22]

Plaintiff's Proposed Construction	Defendants' Proposed Construction
"interconnected computing devices"	"group of computers and associated devices that are connected by communications facilities"

In their briefing on this term, the parties simply offered dueling dictionary definitions. The Court, after reviewing the claims and specification, finds that the term "network" carries a plain and ordinary meaning of "a communications and data exchange system created by connecting two or more computers." At the *Markman* hearing, the Court presented this

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21. At the *Markman* hearing, the Court asked counsel for RGB how a driver function could be paired with multiple motion control operations. (Doc. No. 183, at 159.) RGB did not argue that the preferred embodiment associated a driver function with multiple motion control operations; it instead explained how the Defendants might argue that their software did not infringe the RGB Patents because it did associate a driver function with different motion control operations at different points in time through the use of "tags." (Id. at 159–164.) After reading the claims and specification, the Court is unaware of how the invention could be practiced using a one-to-many association between driver functions and motion control operations. Additionally, counsel for RGB admitted at the *Markman* hearing that "at any given time, [a driver] function is only going to be associated with one motion control operation." (Id. at 160:9–12.)

22. '058 Patent, claims 1–4; '543 Patent, claim 12.

construction to the parties and the parties agreed to the Court's construction. (Doc. No. 183, at 169:10–15.) Accordingly, the parties and Court being in agreement, the Court **construes "network"** to mean **"a communications and data exchange system created by connecting two or more computers."**

V. Construction of Disputed Means-Plus-Function Terms

The asserted patents also contain means-plus-function limitations that require construction. Means-plus-function limitations are governed by 35 U.S.C. § 112, ¶ 6, which provides:

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

35 U.S.C. § 112, ¶ 6 (2006); see Chi. Bd. Options Exch., Inc. v. Int'l Sec. Exch., LLC, 677 F.3d 1361, 1367 (Fed. Cir. 2012).

Construing a means-plus-function limitation involves two steps. The court must first identify the claimed function, and then look to the specification and identify the corresponding structure that performs that function. Chi. Bd. Options Exch., Inc., 677 F.3d at 1367. Under the second step, 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." Med. Instrumentation & Diagnostics Corp. v. Elekta AB, 344 F.3d 1205, 1210 (Fed. Cir. 2003) (quoting B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed. Cir. 1997)) (internal quotation marks omitted). "While corresponding structure need not include all things necessary to enable the claimed invention to work, it must include all structure that actually performs the recited function." Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc., 412 F.3d 1291, 1298 (Fed. Cir. 2005).

"[I]n a means-plus-function claim 'in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.'" Aristocrat Techs. Austl. Prop. Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1333 (Fed. Cir. 2008) (quoting WMS Gaming Inc., v. Int'l Game Tech., 184 F.3d 1339, 1349 (Fed. Cir. 1999)); see also Harris Corp. v. Ericsson Inc., 417 F.3d 1241, 1253 (Fed. Cir. 2005) ("A computer-implemented means-plus-function term is limited to the corresponding structure disclosed in the specification and equivalents thereof, and the corresponding structure is the algorithm.").

"The usage 'algorithm' in computer systems has broad meaning, for it encompasses 'in essence a series of instructions for the computer to follow,' whether in mathematical formula, or a word description of the procedure to be implemented by a suitably programmed computer." Typhoon Touch Techs., Inc. v. Dell, Inc., 659 F.3d 1376, 1384 (Fed. Cir. 2011) (quoting *In re Waldbaum*, 457 F.2d 997, 998 (C.C.P.A. 1972)). Courts have defined an "algorithm" as a "fixed step-by-step procedure for accomplishing a given result; usually a simplified procedure for solving a complex problem, also a full statement of a finite number of steps." Id. at 1385 (quoting *In re Freeman*, 573 F.2d 1237, 1246 (C.C.P.A. 1978)) (internal quotation marks omitted). "Precedent and practice permit a patentee to express that procedural algorithm 'in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure.'" Id. (quoting Finisar Corp. v. DirecTV Group, Inc. 523 F.3d 1323, 1340 (Fed. Cir. 2008)). A patentee is "not required to produce a listing of source code or a highly detailed description of the algorithm to be used to achieve the claimed functions in order to satisfy 35 U.S.C. § 112, paragraph 6." Aristocrat, 521 F.3d at 1338. He or she is required, however, to

at least disclose the algorithm that transforms the general purpose microprocessor to a special purpose computer programmed to perform the disclosed algorithm.   Id.

In the instant case, the parties have agreed that the following five terms from the '236 Patent are means-plus-function limitations.   The parties also agree on the function of these limitations.   After review of the '236 Patent, and in light of the agreement of the parties, the Court finds that the following five terms are means-plus-function limitations with the functions identified by the parties.   The following discussion therefore only addresses the corresponding structures for these means-plus-function limitations.

A.   *"Means for Determining a Driver Unit System Employed by the Software Drivers"*[23]

Function: "determining a driver unit system employed by the software drivers"	
Plaintiff's Proposed Structure	**Defendants' Proposed Structure**
"software code that determines the driver unit system by querying the driver, and equivalents"	"CDriverMgr object within motion component 34, as identified in the '236 Patent at col. 11, lines 15–19 and col. 11, line 58–col. 13, line 6, and equivalents thereof"

RGB explains that in the preferred embodiments, the application program uses a unit system denominated as the Part Coordinate System ("PCS") and the driver uses a unit system denominated as the Machine Coordinate System ("MCS").   (Doc. No. 151, at 25) (citing '236 Patent, at 11:19–21, 12:49–51).   RGB then states that the preferred embodiments teach the algorithm "querying the driver" for determining the driver unit system.   To support this assertion, RGB cites to Appendix B to the RGB Patents, which lists a software function of "(*pMotion)->GetUnits( )."   (Id. at 25, Ex. 12 § 4.2.8.)   RGB also argues that the Defendants "do not even attempt to discern an algorithm," and that the Defendants proposed construction will simply confuse the jury.

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23.   '236 Patent, claim 7.

The Defendants point the Court to the portions of the specification that describe the determination of the MCS and conversion of units between the PCS and MCS. (Doc. No. 157, at 25–26) (citing '236 Patent, at 11:15–19, 12:19–21, 12:54–56). The Defendants state that "CDriverMgr"—a software module listed in the specification—is the only structure identified in the specification that performs the function of determining a driver unit system employed by the software drivers. (Id.) The Defendants also argue that RGB's construction encompasses any software that performs the function of determining the driver unit system by querying the driver, and equivalents.

1. Analysis

The corresponding structure for a mean-plus-function limitation is to be found in a patent's specification. 35 U.S.C. § 112, ¶ 6 (2006). The Defendants correctly cite to the portion of the specification that describes the function of determining a driver unit system employed by the software drivers and the means for performing that function. See '236 Patent, 11:15–19, 11:58 to 13:6. The Court also finds that Figures 6 and 7, as referenced in this portion of the specification, depict the structure that performs the function. See '236 Patent, 12:26–28, 12:43–48, Figs. 6–7. RGB fails, unlike the Defendants, to indicate where its alleged corresponding algorithm structure is clearly linked in the specification. See Med. Instrumentation & Diagnostics Corp. v. Elekta AB, 344 F.3d 1205, 1210 (Fed. Cir. 2003) ("[S]tructure 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." (quoting B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed. Cir. 1997)) (internal quotation marks omitted)). Although RGB makes a number of random cites to the specification and generally summarizes the disclosure

there, nowhere does it specifically cite where there is a clear linkage to the function. See generally (Doc. No. 151, at 24–25.)

The Court finds that the portions of the specification identified above clearly list the "CDriverMgr" as the special purpose software module that carries out the function of determining a driver unit system. See Aristocrat Techs. Austl. Prop. Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1333 (Fed. Cir. 2008) ("[I]n a means-plus-function claim 'in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.'" (quoting WMS Gaming Inc., v. Int'l Game Tech., 184 F.3d 1339, 1349 (Fed. Cir. 1999))). RGB does not argue that the "CDriverMgr" is not the specialized software that performs the specified function. In fact, at the *Markman* hearing, RGB conceded that "CDriverMgr" was the correct structure. (Doc. No. 183, at 173:20–22) ("So, your Honor, my thing is I think in general what they have identified is the correct structure in terms of CUnitMapper or CDriverMgr."). Despite this admission, RGB asks that the Court generalize the structure to "software code" that performs the single step of "querying the driver." The Court finds no support for this approach. The correct approach is to refer to the CDriverMgr and the portions of the specification that disclose its operation.[24]

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24. E.g., Harris Corp. v. Ericsson Inc., 417 F.3d 1241, 1254 (Fed. Cir. 2005) ("Specifically, the patent discloses, as corresponding structure, a processor 37, 'advantageously comprised of a pair of processors - a support processor (SUPP) [37A] and a fast array processor (FAP) [37B,]' shown in Figure 4 and described at col. 11, l. 37 -col. 12, l. 32, which is programmed to carry out the disclosed 'data recovery algorithm' illustrated in Figures 8A, 8B, and 9 and described at col. 7, l. 18 -col. 8, l. 38; col. 13, l. 45 -col. 14, l. 20; and col. 15, l. 2 -col. 16, l. 11."); Lockheed Martin Corp. v. Space Systems/Loral, Inc., 324 F.3d 1308, 1315 (Fed. Cir. 2003) ("The structure corresponding to the means recited in limitation [b] is the sine generator (46) and wheel electronics (48) noted in Figure 4 above. . . .   The structure corresponding to the means recited in limitation [c] is the tachometer (52) and difference amplifier (54). . . . The structure corresponding to the means recited in limitation [d] is the 'earth horizon' or 'roll' sensor (56) discussed above."); Commonwealth Scientific and Indus. Research Org. v. Lenovo (U.S.), Inc., No. 6:09–CV–399, 2012 WL 170972, at *8 (E.D. Tex. Jan. 20, 2012) (Davis, C.J.) ("[T]he Court finds that the structure is the synchronising calculator and detector in Figure 6 and the synchronising calculator and detector block 65 in Figure 8.").

Finally, in its briefs and at the *Markman* hearing, RGB argued that the CDriverMgr and the corresponding cites to the specification do not offer sufficient definition of an algorithm to allow a jury to perform an infringement analysis. That may well be, but it does not mean that the Court's identification of a clearly linked structure is wrong. While RGB's argument may highlight proof or validity problems, those issues are not before the Court.

2. Court's Construction

The Court finds that **"means for determining a driver unit system employed by the software drivers"** is a means-plus-function limitation with the function of "determining a driver unit system employed by the software drivers" and the structure of **"CDriverMgr object within motion component 34, as identified in the '236 Patent at 11:15–19, 11:58 to 13:6, Figs. 6–7, and equivalents thereof."**

B. *"Means for Converting an Application Unit System Employed by the Application Program into the Driver Unit System"*[25]

Function: "converting an application unit system employed by the application program into the driver unit system"	
Plaintiff's Proposed Structure	Defendants' Proposed Structure
"software code that converts measurements from one unit system to another by applying a conversion factor, and equivalents"	"CUnitMapper object within motion component 34, as identified in the '236 Patent at col. 11, line 15–col. 13, line 6, and equivalents thereof"

The parties agree that the "CUnitMapper" software module described in the specification is the structure that performs the stated function of converting units between the PCS and MCS. See (Doc. No. 151, at 25–26); (Doc. No. 157, at 26); (Doc. No. 183, at 173:20–22). The parties also cite to similar portions of the specification in describing how the CUnitMapper carries out this function. See (Doc. No. 151, at 26) (citing '236 Patent, 11:19–22, 12:19–21) (Doc. No. 157, at

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25. '236 Patent, claim 7.

32–33) (citing '236 Patent, 11:19–21, 12:19–21, 12:54–56). However, as with the last term, RGB requests a generalized description of the structure, and the Defendants request a description that names the specific software module and the portions of the specification that disclose its operation.

1. Analysis

The Court agrees with the parties that CUnitMapper is the specialized software module identified in the specification that carries out the function of converting an application unit system into the driver unit system. The Court finds that both parties correctly cite portions of the specification that describe the means by which the CUnitMapper performs this function. Specifically, the Court finds that the CUnitMapper and its operation are depicted in the '236 Patent at 11:17–22, 12:19–21, 12:36–38, 12:43–58, and Figs 6–7. As with the last term, RGB asks the Court to generalize the structure to "software code that converts measurements from one unit system to another by applying a conversion factor, and equivalents." For the reasons stated above in relation to the last term, the Court will not employ RGB's requested approach.[26]

2. Court's Construction

The Court finds that **"means for converting an application unit system employed by the application program into the driver unit system"** is a means-plus-function limitation with the function of "converting an application unit system employed by the application program into the driver unit system," and the structure of **"CUnitMapper object within motion component 34, as identified in the '236 Patent at 11:17–22, 12:19–21, 12:36–38, 12:43–58, Figs 6–7, and equivalents thereof."**

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26. See supra note 24 and accompanying text. The Court also notes that RGB's proposed construction is incorrect because it essentially restates the function. See Aristocrat Techs. Austl. PTY Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1334 (Fed. Cir. 2008) ("The equation thus does not disclose the structure of the claimed device, but is only another way of describing the claimed function.").

C. "Means for Generating Command Data Strings for Controlling the Selected Motion Control

Device Based on the Command Format Template and the Application Program"[27]

Function: "generating command data strings for controlling the selected motion control device based on the command format template and the application program"	
Plaintiff's Proposed Structure	**Defendants' Proposed Structure**
"software code that utilizes the set of commands making up the motion control command language and builds command data strings according to a command format template based upon the motion control operation(s) requested by the application program, and equivalents"	"language driver using a database, the key fields of which are an index field a command format field and a response format field, as identified in the '236 Patent at col. 34, lines 28–40 and equivalents thereof"

RGB explains that the "language driver[s] 44," described in the '236 Patent, at 35:17–22, construct command data string containing ASCII characters using the command format template. (Doc. No. 151, at 28) ("[T]he language driver 44 will construct a command data string . . . ." (citing '236 Patent, 35:17–22)). RGB also describes steps by which the language drivers 44 perform this function. (Id.) RGB then simply concludes that the structure is "software code that utilizes the set of commands making up the motion control command language and builds command data strings according to a command format template based upon the motion control operation(s) requested by the application program, and equivalents." (Id.)

The Defendants also identify the language drivers 44 as performing the function of generating command data strings. (Doc. No. 157, at 28) (citing '236 Patent, 34:28–38). The Defendants argue that RGB's construction is overly broad and encompasses any software code that performs the stated function.

1. Analysis

The Court agrees with the parties that language drivers 44 are the software modules identified in the specification that carry out the function of generating command data strings for

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27. '236 Patent, claim 10.

controlling the selected motion control device based on the command format template and the application program. See '236 Patent, 35:17–22 ("Using the command format template, the language driver 44 will construct a command data string . . . ."). The Court rejects RGB's proposed structure as it simply restates the function. See Aristocrat Techs. Austl. PTY Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1334 (Fed. Cir. 2008) ("The equation thus does not disclose the structure of the claimed device, but is only another way of describing the claimed function."). The Court agrees with the Defendants that the specification states that the language drivers 44 perform the function using "a database the key fields of which are an index field, a command format field, and a response format field." '236 Patent, 34:24–26.

The Court finds that the Defendants do not cite the entire portion of the specification that discloses the means by which the language drivers 44 perform the function. The correct portion of the specification is '236 Patent, 34:23 to 35:22, 35:31 to 37:10, and the figures referenced therein. The Court recognizes that this is a lengthy citation to the specification, but it is necessitated by the fact that the patentee described in detail the structure that performs the function. The first portion includes a detailed description of the language drivers 44 and how they carry out the function. See '236 Patent, 34:23 to 35:8. The second portion describes in general language how the language drivers 44 carry out the function:

> The language drivers thus operate generally as follows. As described above, the motion component 35 will call the 10 driver function implemented by the language driver 44 and, in many cases, will pass parameters necessary to carry out that function. The language driver 44 will use the index for that driver function to look up the command format template and the response format template associated with the appropriate driver function.
> Using the command format template, the language driver 44 will construct a command data string containing ASCII characters. The command data string carries the commands and parameters necessary to implement the given driver 20 function in a desired manner on the motion control device 20 associated with the language driver 44.

Id. at 35:8–22.   The third portion sets forth four examples of how the language drivers 44 carry

out the function.   Id. at 35:31 to 37:10.

1.   Court's Construction

The Court finds that **"means for generating command data strings for controlling the**

selected motion control device based on the command format template and the application

program" is a means-plus-function limitation with the function of "generating command data

strings for controlling the selected motion control device based on the command format template

and the application program," and the structure of **"language drivers 44 using a database, the**

key fields of which are an index field, a command format field, and a response format field,

as identified in the '236 Patent at 34:23 to 35:22, 35:31 to 37:10, the figures referenced

therein, and equivalents thereof."

D.   *"Means for Parsing Response Data Strings Generated by the Selected Motion Control Device*

Based on the Response Format Template and the Application Program"[28]

Function: "parsing response data strings generated by the selected motion control device based on the response format template and the application program"	
Plaintiff's Proposed Structure	**Defendants' Proposed Structure**
"software code that interprets response data strings according to the response format template and then converts those strings into data types supported by the application program, and equivalents"	"language driver using a database, the key fields of which are an index field a command format field and a response format field, as identified in the '236 Patent at columns 35–37 and equivalents thereof"

This term is closely intertwined with the last term.   The two functions of these terms work

hand in hand.   For the instant term, the parties cite identical portions of the specification, and (as

with the last term) the parties identify language drivers 44 as the software modules identified in the

specification that carry out the function.   See (Doc. No. 151, at 28) (citing '236 Patent, 35:23–26);

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28.   '236 Patent, claim 10.

(Doc. No. 157, at 28) (same). The parties' arguments for this term mirror those raised for the last term. RGB describes steps taken to perform the function and offers a generalized description of the structure; the Defendants refer to the specification for the structure and argue that RGB's proffered construction is overly broad and generalized.

1. Analysis

As the parties correctly observe, the specification discloses that the instant function (like the last function) is performed by the language drivers 44. '236 Patent, 35:23–26 ("[T]he language driver 44 uses the response format template to parse a response data string sent by the particular motion control device 20 in response to the command data string."). As described above, the specification states that the language drivers 44 operate using "a database the key fields of which are an index field, a command format field, and a response format field." '236 Patent, 34:24–26. As with the last term, the Court rejects RGB's proposed structure because it simply restates the function. See Aristocrat, 521 F.3d at 1334.

While the Court finds that the Defendants generally cite the correct portion of the specification that discloses the means by which the language drivers 44 perform the function, a more specific citation is '236 Patent, 34:23 to 35:16, 35:23 to 37:10, and the figures referenced therein. The first portion of this citation includes a detailed description of the language drivers 44 and how they carry out the function. See '236 Patent, 34:23 to 35:8. The second portion describes in general language how the language drivers 44 carry out the function:

> The language drivers thus operate generally as follows. As described above, the motion component 35 will call the 10 driver function implemented by the language driver 44 and, in many cases, will pass parameters necessary to carry out that function. The language driver 44 will use the index for that driver function to look up the command format template and the response format template associated with the appropriate driver function. . . .
> Similarly, the language driver 44 uses the response format template to parse a response data string sent by the particular motion control device 20 in response to

the command data string. The response format template thus allows the language driver 44 to pass from the motion control device 20 to the motion control component 35 any commands and/or parameters necessary to enable the controlling application 26 to function as intended.

Id. at 35:8–16, 35:23–30. The third portion sets forth four examples of how the language drivers 44 carry out the function. Id. at 35:31 to 37:10.

2. Court's Construction

The Court finds that **"means for parsing response data strings generated by the selected motion control device based on the response format template and the application program"** is a means-plus-function limitation with the function of "parsing response data strings generated by the selected motion control device based on the response format template and the application program," and the structure of **"language drivers 44 using a database, the key fields of which are an index field, a command format field, and a response format field, as identified in the '236 Patent at 34:23 to 35:16, 35:23 to 37:10, the figures referenced therein, and equivalents thereof."**

E. *"Stream Control Means for Communicating the Control Commands to the Selected Destination of Control Commands Based on the Transmit Stream Code Contained by the Stream Associated with the Selected Destination of Control Commands"*[29]

Function: "communicating the control commands to the selected destination of control commands based on the transmit stream code contained by the stream associated with the selected destination of control commands"	
Plaintiff's Proposed Structure	**Defendants' Proposed Structure**
"software code responsible for sending and retrieving data to and from a specific destination—exemplified by the read and write algorithms at '236 Patent, 20:50–21:20, and their equivalents."	"motion control drivers 30(a), 30(b), and 30(c) as identified in the '236 Patent at column 8, line 43–column 9, line 24 and equivalents thereof"

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29. '236 Patent, claims 8, 9.

In *Fanuc*, Judge Folsom construed this term's structure as "software code responsible for sending and retrieving data to and from a specific destination—exemplified by the read and write algorithms at '236, 20:50[to 21:20], and their equivalents." Fanuc, No. 2:07-CV-418, 2009 U.S. Dist. LEXIS 127428, at *89–90 (E.D. Tex. Aug. 25, 2009). RGB urges the Court to follow Judge Folsom's lead and construe the term's structure in the same manner. (Doc. No. 151, at 29–30.)

The Defendants cite a separate potion of the specification, and state that this portion "in combination with the passage cited by RGB make clear that the software drivers are the only structure that perform the claimed function." (Doc. No. 157, at 30) (citing '236 Patent, 8:43 to 9:24). The Defendants argue that RGB's construction is too broad because it "encompasses *any* software code that performs the function of sending and retrieving data to and from a specific destination." (Id.)

1.   Analysis

The portions of the specification cited by both RGB and the Defendants refer to the claimed function. The portion cited by RGB and employed by Judge Folsom in *Fanuc*, fall under the relevant heading "Streams" and describe in a step-by-step manner the means by which control commands are communicated using streams and stream code:

> After opening a stream, it is ready to perform data transport operations. There are two main data transport operations available: Reading data, and writing data. FIG.30 describes the process of writing data to the stream. When writing to the stream, the following steps occur. First the driver directs the stream to write data to the target and passes the data to the stream. Next, the stream passes the data to the CStreamDisp object. The CStreamDisp object passes the block of data to the CIOMgr and directs it to write it to the target. The CIOMgr object either passes the complete block of data to the CIOHAL object, or stores the block in an internal buffer and then passes pieces of the buffer to the CIOHAL object until the complete buffer is sent. The CIOHAL object takes the data passed to it and either sends it directly to the target, passes it to a device driver, or calls COMM API to send the data to the Serial 10 port. The device driver or COMM API sends the data directly to the hardware controlled.

'236 Patent, 20:50–67. The Court finds that this portion of the specification is clearly linked to the claimed function and contains the algorithm that describes the means by which the function is performed. However, the Court will not reference the last twenty lines cited by RGB, '236 Patent, 21:1–20, as these do not specifically disclose the means for the function at issue, but instead are directed to the means-plus-function limitation in claim 9 of the '236 Patent that involves the processing of response data. See '236 Patent, claim 9 ("A system as recited in claim 8, in which certain of the destinations of control commands generate response data, wherein: . . . the stream control means processes the response data based on the response stream code."); id. at 21:1–20 (describing in a step-by-step fashion the means by which response data is read from the target using streams); Fanuc, 2009 U.S. Dist. LEXIS 127428, at *84–91 (finding that '236 Patent, 20:50 to 21:20 disclosed the structure for the means-plus-function limitations in both claims 8 and 9 of the '236 Patent). The Court also finds that the means for performing the function at issue is disclosed in Figure 30 as cited within the above reference portion of the specification. See '236 Patent, Fig. 30; id. at 20:52–53 ("FIG.30 describes the process of writing data to the stream.").

The portion of the specification which Defendants propose, '236 Patent, 8:43 to 9:24, while referencing the function, simply presents a general description and preview of the function; it does not disclose the means for performing the function as does '236 Patent, 20:50–67. Compare '236 Patent, 8:43 to 9:24 ("The software system designer . . . will write transmit stream code for each stream 28 that determines how the control commands are to be transferred to a given one of the control command destinations . . . . [L]ater when run, the system 22 transfers the control commands to the selected control command destination 16 and/or 34 based on the transmit stream code in the stream 28 associated with the selected control command destination 16 and/or 34."), with id. at 20:50–67 ("There are two main data transport operations available: Reading data,

and writing data. . . . When writing to the stream, the following steps occur.") Furthermore, while the Defendants cite to this separate portion of the specification, they do not take issue with the portion cited by RGB and employed by Judge Folsom in *Fanuc*. (Doc. No. 157, at 30) (citing '236 Patent, 8:43 to 9:24). In fact, they essentially admit that this portion is linked to the function by referencing it in support of their construction. Id. ("This statement, in combination with the passage cited by RGB make clear that the software drivers are the only structure that perform the claimed function . . . ."). The Court will not reference the portion of the specification cited by the Defendants because it does specifically disclose the means for performing the function as does '236 Patent, 20:50–67.

Finally, the Court agrees with the Defendants that the specification makes clear that the software drivers 30 are the structure that performs the claimed function. '236 Patent, 20:53–56 ("When writing to the stream, the following steps occur. First the driver directs the stream to write data to the target and passes the data to the stream."); id. at Fig. 30; see also id. at 20:9–13 ("Driver directed operations occur when each driver 30 uses the stream component 28 connected to it. Remember, each stream component is used as the data transport layer. Each driver uses the stream to transfer the motion control command data, it generates, to the output target.").

2. Court's Construction

The Court finds that **"stream control means for communicating the control commands to the selected destination of control commands based on the transmit stream code contained by the stream associated with the selected destination of control commands"** is a means-plus-function limitation with the function of "communicating the control commands to the selected destination of control commands based on the transmit stream code contained by the stream associated with the selected destination of control commands," and the structure of

"software drivers 30 as identified in the '236 Patent at 20:50–67, Figure 30, and equivalents thereof."

VI. Conclusion

The Court adopts the constructions set forth in this opinion for the terms of the patents-in-suit. <u>See also</u> Appendix A. The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 25th day of July, 2013.

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Zack Hawthorn
United States Magistrate Judge

Appendix A: Court's Construction of Claim Terms

TERMS, PHRASES, AND CLAUSES	COURT'S CONSTRUCTION
"driver code"	"code associated with a hardware device or group of related hardware devices, which helps generate commands necessary to perform motion control operations associated with at least some driver functions"
"control commands"	"command codes in hardware language, which instruct a motion control device to perform motion control operations"
"motion control component"/ "motion component"	"an intermediate software layer containing component code that is separate and distinct from the application program and the software driver"
"component function"	"a hardware independent function that corresponds to a motion control operation"
"software driver"/ "driver"	"one or more controller dependent software modules that support some core driver functions and are used to control a hardware device or group of related hardware devices"
"component code"	"software code in the motion control component that associates at least some of the component functions with at least some of the driver functions"
"motion control"	No construction necessary.
"motion control operation"/ "motion operation"	"Hardware independent operations that are performed by a motion control device."
"primitive operations"/ "primitive motion operations"	"Motion control operations that cannot be simulated using a combination of other motion control operations."
"non-primitive operations"/ "non-primitive motion operations"	"Motion control operations that can be simulated using a combination of other motion control operations."
"motion control device"	"A device comprising a controller and a mechanical system capable of moving an object in a desired manner."
"application program comprising a set/series of component functions"	"A software program designed to handle specific tasks."
"driver functions"	"Hardware independent functions that are separate and distinct from the component functions."
"core driver function"	"A driver function associated with one of the primitive motion control operations."

TERMS, PHRASES, AND CLAUSES	COURT'S CONSTRUCTION
"extended driver function"	"A driver function associated with one of the non-primitive motion control operations."
"network"	"A communications and data exchange system created by connecting two or more computers."
"means for determining a driver unit system employed by the software drivers"	Function: "determining a driver unit system employed by the software drivers."
	Structure: ""CDriverMgr object within motion component 34, as identified in the '236 Patent at 11:15–19, 11:58 to 13:6, Figs. 6–7, and equivalents thereof."
"means for converting an application unit system employed by the application program into the driver unit system"	Function: "converting an application unit system employed by the application program into the driver unit system."
	Structure: "CUnitMapper object within motion component 34, as identified in the '236 Patent at 11:17–22, 12:19–21, 12:36–38, 12:43–58, Figs 6–7, and equivalents thereof."
"means for generating command data strings for controlling the selected motion control device based on the command format template and the application program"	Function: "generating command data strings for controlling the selected motion control device based on the command format template and the application program."
	Structure: "language drivers 44 using a database, the key fields of which are an index field, a command format field, and a response format field, as identified in the '236 Patent at 34:23 to 35:22, 35:31 to 37:10, the figures referenced therein, and equivalents thereof."
"means for parsing response data strings generated by the selected motion control device based on the response format template and the application program"	Function: "parsing response data strings generated by the selected motion control device based on the response format template and the application program."
	Structure: "language drivers 44 using a database, the key fields of which are an index field, a command format field, and a response format field, as identified in the '236 Patent at 34:23 to 35:16, 35:23 to 37:10, the figures referenced therein, and equivalents thereof."

TERMS, PHRASES, AND CLAUSES	COURT'S CONSTRUCTION
"stream control means for communicating the control commands to the selected destination of control commands based on the transmit stream code contained by the stream associated with the selected destination of control commands"	Function: "communicating the control commands to the selected destination of control commands based on the transmit stream code contained by the stream associated with the selected destination of control commands."
	Structure: "software drivers 30 as identified in the '236 Patent at 20:50–67, Figure 30, and equivalents thereof."