Nordyne Inc v. Rbc Manufacturing Corporation

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MEMORANDUM AND ORDER

This matter comes before the Court after a October 27, 2010 hearing, held pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996) (holding that claim interpretation of disputed patent terms is "exclusively within the province of the court").

I. BACKGROUND FACTS AND PROCEDURAL HISTORY

On February 4, 2009, Plaintiff Nordyne Inc. ("Plaintiff") filed a Complaint for Declaratory Judgment [doc. #1] against Regal Beloit Electric Motors, Inc. Subsequently, on July 10, 2009, Plaintiff filed a First Amended Complaint for Declaratory Judgment [doc. #10] against Defendant RBC Manufacturing Corporation ("Defendant"), thereby correcting the initial Complaint to name the proper party to the suit. Plaintiff seeks a judgment declaring that the claims of United States Patent No. 5,592,058 ("the '058 Patent")[1] are invalid, and not infringed by Plaintiff. Defendant filed its Answer and Counterclaims [doc. #11] on July 30, 2009, which raised one counterclaim against Plaintiff, infringement of the '058 Patent.

This matter was set for a Markman hearing on October 27, 2010. Prior to the hearing, the parties each submitted an Opening Claim Construction Brief [docs. #42, 43]. Additionally, the Court is in receipt of Plaintiff's Responsive Claim Construction Brief [doc. #46], filed on October 7, 2010, and Defendant's Reply Claim Construction Brief [doc. #47], also filed on October 7, 2010. Within these Briefs, the parties identified multiple claim terms for which they seek a construction by this Court.

II. STANDARD FOR CLAIM CONSTRUCTION

"An infringement analysis involves two steps. First, the court determines the scope and meaning of the patent claims asserted, and then the properly construed claims are compared to the allegedly infringing device." Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454 (Fed. Cir. 1998) (en banc) (internal citations omitted). Because this case involves an infringement analysis, the Court must first construe the patent claim terms. "[T]he construction of a patent, including terms of art within its claim, is exclusively within the province of the court." Markman v. Westview Instruments, Inc., 517 U.S. 370, 372 (1996).

Section 112 of the Patent Act provides that [t]he specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and

exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention. 35 U.S.C. § 112. The statute also specifies that the specification must "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." Id. As the Federal Circuit recognized in Phillips v. AWH Corp., these provisions in the Patent Act "frame the issue of claim interpretation," and present the issue of to what extent a court "should resort to and rely on a patent's specification in seeking to ascertain the proper scope of its claims." 415 F.3d 1303, 1312 (Fed. Cir. 2005).

"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.'" Id. at 1312 (quoting Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1115 (Fed. Cir. 2004); see also Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996) ("we look to the words of the claims themselves . . . to define the scope of the patented invention"); Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995) ("The written description part of the specification itself does not delimit the right to exclude. That is the function and purpose of claims."). "Because the patentee is required to 'define precisely what his invention is,' . . . it is 'unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.'" Phillips, 415 F.3d at 1312 (quoting White v. Dunbar, 119 U.S. 47, 52 (1886)).

The Federal Circuit has "frequently stated that the words of a claim 'are generally given their ordinary and customary meaning.'" Id. (quoting Vitronics, 90 F.3d at 1582). "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." Id. at 1313. It is generally understood that inventors are considered to be persons skilled in the field of the invention. See id. Additionally, "the person of ordinary skill in the art is deemed to read the claim term . . . in the context of the entire patent, including the specification." Id. Thus, the ordinary meaning of the term must be looked at "'in the context of the written description and the prosecution history.'" Medrad, Inc. v. MRI Devices, Corp., 401 F.3d 1313, 1319 (Fed. Cir. 2005) (quoting DeMarini Sports, Inc. v. Worth, 239 F.3d 1314, 1324 (Fed. Cir. 2001)).

While there will be some claim terms for which the ordinary and customary meaning is readily apparent, this is often not the case. In cases falling into the latter category, the court should turn to "'those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean." Phillips, 415 F.3d at 1314 (quoting Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1116 (Fed. Cir. 2004)). Such sources include "'the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.'" Id. (quoting Innova, 381 F.3d at 1116).

First, the words of the claims "provide substantial guidance as to the meaning of particular claim terms." Id. Specifically, "the context in which a term is used in the asserted claim can be highly instructive." Id. Additionally, "[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term. Because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims." Id. (internal citation omitted).

Second, the claims "'are part of a fully integrated written instrument,' consisting principally of a specification that concludes with the claims. For that reason, claims 'must be read in view of the specification, of which they are a part." Id. at 1315 (quoting Markman v. Westview Instruments, Inc., 52 F.3d 967, 978-79 (Fed. Cir. 1995)) (internal citation omitted). As the Federal Circuit originally noted in Vitronics Corp. v. Conceptronic, Inc., "the 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." 90 F.3d 1576, 1582 (Fed. Cir. 1996). However, "although the specification often describes very specific embodiments of the invention, [the Federal Circuit] has repeatedly warned against confining the claims to those embodiments." Phillips, 415 F.3d at 1323. The Federal Circuit has specifically "rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment." Id.

Third, the Federal Circuit has "held that a court 'should also consider the patent's prosecution history, if it is in evidence.'" Id. at 1317 (quoting Markman, 52 F.3d at 980). The patent's prosecution history, which is part of the intrinsic evidence, "consists of the complete record of the proceedings before the [United States Patent and Trademark Office] and includes the prior art cited during the examination of the patent." Id. "[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Id.

Finally, although it is not as significant as the previously discussed intrinsic evidence, the Federal Circuit has "authorized district courts to rely on extrinsic evidence, which 'consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.'" Id. (quoting Markman, 52 F.3d at 980). Treatises and dictionaries can be helpful in construing claim terms, especially technical dictionaries, which can help the court "'to better understand the underlying technology' and the way in which one of skill in the art might use the claim terms." Id. at 1318 (quoting Vitronics, 90 F.3d at 1584 n.6). Additionally, extrinsic evidence in the form of expert testimony can be useful to a court for a variety of purposes, such as to provide background on the technology at issue, to explain how an invention works, to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field. However, conclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court. Similarly, a court should discount any expert testimony "that is

clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, with the written record of the patent."

Id. (quoting Key Pharms. v. Hercon Labs. Corp., 161 F.3d 709, 716 (Fed. Cir. 1998)) (internal citations omitted).

Because extrinsic evidence can be helpful, a court has discretion to consider and use it. However, "it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." Id. at 1319. This is because the Federal Circuit has clearly established its view that "extrinsic evidence in general [is] less reliable than the patent and its prosecution history in determining how to read claim terms." Id. at 1318. In Phillips, the Federal Circuit explained this view:

First, extrinsic evidence by definition is not part of the patent and does not have the specification's virtue of being created at the time of patent prosecution for the purpose of explaining the patent's scope and meaning. Second, while claims are construed as they would be understood by a hypothetical person of skill in the art, extrinsic publications may not be written by or for skilled artisans and therefore may not reflect the understanding of a skilled artisan in the field of the patent. Third, extrinsic evidence consisting of expert reports and testimony is generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence. The effect of that bias can be exacerbated if the expert is not one of skill in the relevant art or if the expert's opinion is offered in a form that is not subject to cross-examination. Fourth, there is a virtually unbounded universe of potential extrinsic evidence of some marginal relevance that could be brought to bear on any claim construction question. In the course of litigation, each party will naturally choose the pieces of extrinsic evidence most favorable to its cause, leaving the court with the considerable task of filtering the useful extrinsic evidence from the fluff. Finally, undue reliance on extrinsic evidence poses the risk that it will be used to change the meaning of claims in derogation of the "indisputable public records consisting of the claims, the specification and the prosecution history," thereby undermining the public notice function of patents.

Id. (quoting Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1578 (Fed. Cir. 1995)) (internal citations omitted).

III. DISCUSSION

In this case, the '058 Patent contains 74 claims, and the parties have identified multiple disputed claim terms. Although the parties have reached an agreement as to the construction of several of these claim terms, the majority were argued at the Markman hearing or were submitted on the briefs. The Court is now obligated to construe the meaning of the disputed claims in accordance with the standards set forth above.

A. "PROGRAMMABLE MEMORY," "MEMORY," AND "INSTRUCTION MEMORY"

Plaintiff argues that the term "programmable memory" in claims 1, 55, 58-60, 63, 68-71, and 74 of the '058 Patent, and the term "memory" in claims 61 and 62 should be construed to mean "programmable, non-volatile memory, physically distinct from any ROM or RAM inherent to the microprocessor." Plaintiff similarly argues that the term "instruction memory" in claims 1, 60, and 71 should be construed to mean "a read only memory that is physically distinct from both the programmable memory and from any ROM or RAM inherent to the microprocessor." Defendant argues that no construction is necessary, and the terms should be given its ordinary meaning. Alternatively, Defendant argues that if a construction is necessary, "programmable memory" and "memory" should be construed to mean "programmable, non-volatile memory," and "instruction memory" should be construed to mean "a memory that stores instructions for controlling operation of the microprocessor."

Claims 1, 60, and 71 call for both "a programmable memory for storing parameters representative of the system," and "an instruction memory for storing instructions controlling the operation of the microprocessor." Defendant argues that there is nothing in these claims that requires that the programmable memory and the instruction memory must be separate and distinct from memory in the microprocessor. However, Plaintiff's reference to the Prosecution History of the '058 Patent is persuasive. Specifically, Plaintiff points out that Defendant's predecessor (General Electric) successfully argued to the Board of Patent Appeals and Interferences, on appeal from the patent examiner's initial denial of the patent application, that its invention had a PNV memory, a ROM, and a RAM. Counsel for Defendant confirmed the Prosecution History in his argument before this Court:

Our position is that in distinguishing over Pohl[2] , GE did say that it has to -- that the invention, unlike Pohl,has a memory for storing -- a programmable memory that can be used to store parameters. Pohl had nothing of the sort. And at the point that they point us to and in and in Amendment A at Page 15, and I'm just going to jump back there, it talks about how the applicant's invention includes a PNV memory, a ROM and a RAM. It does say that. We're not trying to take that back. But what we are saying is that when you look at what that ultimately means, that does not mean (and this is our key point) that the programmable memory for storing parameters has to be in any particular component; has to be in any particular location. There's nothing in that statement that says it can't be part of the microprocessor. That's our point. We're not walking away from that statement one bit, but that statement doesn't say what they say it says. They're overreading it, and that is our fundamental point. So that when you look at that statement, Your Honor, in distinguishing from the Pohl which had the ROM and RAM, there's nothing in there that says it can't be part of the microprocessor. We still have to have the memories, but it can't -- but in terms of the location of those memories, our position is that the patent does not speak to that, and certainly the Prosecution History does not exclude the possibility that the programmable memory or the memory could be part of the microprocessor. (Hearing Transcript, doc. #55, p.58 l.16-p.59 l.15). Plaintiff's response to the above quoted passage is persuasive:

Our position, Judge, is not that you can't have a single electronic board that has a microprocessor

and three different types of memory connected to that board such that it would be a microcontroller. Our position is that these still have to be distinct different types of memory as were set forth in both the claims, the Specification and the Prosecution History.

[W]e're not saying that they can't be on the same board. What the claim construction is is that it's distinct from the memory inherent in the microprocessor, and that it's distinct from the programmable memory in both recitations; that they're distinct places of memory. And that's exactly what the claims say when it says that you've got programmable memory and you got a -- an instruction memory. They're separate. They're not merged together. They're not one. And that's what GE made clear in the Prosecution. (Hearing Transcript, doc. #55, p.67 l.12-19, p.69 l.10-18).

Defendant is correct that the location of each distinct memory on a chart is not controlling. However, the Court concludes that the invention has three separate memories: the programmable non-volatile memory, the instruction memory, and the memory inherent to the microprocessor. As such, the Court will construe the terms in a way that highlights the separateness of the three types of memory. "Programmable memory" in claims 1, 55, 58-60, 63, 68-71, and 74, and "memory" in claims 61 and 62 will be construed to mean "programmable, nonvolatile memory, physically distinct from any ROM or RAM inherent to the microprocessor." "Instruction memory" in claims 1, 60, and 71 to mean "a memory that stores instructions 927 controlling the operation of the microprocessor, separate from programmable memory and memory inherent to the microprocessor."

With respect to the term "memory" in claims 6, 15, 16, 19, and 23-29, the parties apparently agree that the term refers to the programmable memory in claim 1, and thus should be construed consistently with that term. As such, the court will construe the term "memory" in claims 6, 15, 16, 19, and 23-29 to mean "programmable, non-volatile memory, physically distinct from any ROM or RAM inherent to the microprocessor."

B. "RECEIVING A PARAMETER SELECT SIGNAL" AND "RECEIVING THE SYSTEM CONTROL SIGNAL"

Plaintiff argues that the term "receiving a parameter select signal" in claims 58, 59, and 62 should be construed to mean "receiving a parameter select signal via an opto-isolator." Similarly, Plaintiff argues that the term "receiving the system control signal" in claim 62 should be construed to mean "receiving the system control signal via opto-isolators." Defendant argues that both of these terms should be given their ordinary meaning, but if construction is necessary, the Court should construe "receiving a parameter select signal" to mean "receiving an electrical signal that is used to select one or more parameters," and "receiving the system control signal" to mean "receiving a signal representing conditions of the system's environment."

The Court agrees with Defendant that both of these terms are clear and require no construction. Plaintiff's proposed construction for both terms reads in limitations that are not supported by the

intrinsic evidence, particularly a structural element. These claims are method claims, and not apparatus claims that are written in means-plus-function language, for which it might be appropriate to read in a structure element. Moreover, Plaintiff improperly seeks to include language from the preferred embodiment into the claims. See Phillips v. AWH Corp., 415 F.3d 1303, 1323 (Fed. Cir. 2005) ("[W]e have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment. That is not just because section 112 of the Patent Act requires that the claims themselves set forth the limits of the patent grant, but also because persons of ordinary skill in the art rarely would confine their definitions to the exact representations in the embodiments." (internal citation omitted)). The Court concludes that there is nothing in these claim terms that requires a reference to opto-isolators, and thus, "receiving a parameter select signal" and "receiving the system control signal" require no further definition.

C. "SYSTEM CONTROL SIGNAL"

Plaintiff argues that the term "system control signal" in claims 1, 8, 10, 12, 55, 58, 59, 61, 62, 68-70, 73, and 74 requires no construction, and should be given its plain meaning. Alternatively, Plaintiffs argues that the term should be construed to mean "a signal generated by the central means." Defendant argues that the term should be construed to mean "a signal representing conditions of the system's environment." The Court believes that Defendant's proposed construction attempts to read a limitation into the claim term that does not appear in the claim language or the specification. Moreover, the Court believes that construction is unnecessary and the plain meaning of the term shall apply.

D. "PARAMETER SELECT SIGNAL"

Plaintiff argues that the claim term "parameter select signal" in claims 1, 2, 3, 5, 55, 58-63, 68-71, and 74 should be construed to mean "an electrical signal that is used indirectly to select parameters stored in the programmable memory." Defendant argues that the term does not require construction; however, if the Court determines that construction is necessary, Defendant argues that the term should be construed to mean "an electrical signal that is used to select one or more parameters." The Court notes that there is no reference in the claim language to optoisolators, nor does the language state that the signal is used indirectly. Plaintiff's attempt to read the "indirect" element into the term limitation language is rejected. The Court will otherwise combine the proposed constructions, and construe the term "parameter select signal" to mean "an electrical signal that is used to select one or more parameters stored in the programmable nonvolatile memory."

E. "SYSTEM FOR DRIVING A COMPONENT OF A HEATING, VENTILATING, AND/OR AIR CONDITIONING (HVAC) SYSTEM" AND "A HEATING, VENTILATING, AND/OR AIR CONDITIONING (HVAC) SYSTEM"

Plaintiff argues that the claim term "system for driving a component of a heating, ventilating, and/or

air conditioning (HVAC) system" in claims 1, 58, 73, and 74 should be construed to mean "the elements or steps identified in claims 1, 58, 73, and 74, respectively, following the transition 'comprising,' expressly excluding an HVAC system." Plaintiff argues that the claim term "a heating, ventilating, and/or air conditioning (HVAC) system," also in claims 1, 58, 73, and 74, should be construed to mean "the elements of a heating, ventilating, and/or air conditioning system expressly excluding the system (including a motor) for driving a component of the HVAC system." Defendant argues that it is not necessary to construe either claim term. However, if the Court believes otherwise, Defendant argues that "system for driving a component of a heating, ventilating, and/or air conditioning (HVAC) system" should be construed to mean "a system for transmitting motion to a part of an HVAC system," and "a heating, ventilating, and/or air conditioning (HVAC) system" should be construed to mean "a system for heating, ventilating, and/or air conditioning." The Court agrees with Defendant that no construction is required. Plaintiff's attempt to read a negative limitation into the claim language is not supported by the intrinsic evidence or by the claims themselves.

F. CALIBRATING/CALIBRATION PARAMETERS

Plaintiff argues that the term "calibrating/calibration parameters" in claims 15-18, 55-57, 59, 61, and 74 should be construed to mean "parameters derived from a measurement that are selectable by a parameter select signal." Defendant argues that the term should be construed to mean "information used to make an adjustment based on a comparison of a measured value with a reference value."

The Patent Specification teaches that in the manufacturing process, a motor or artificial load is connected to the system under various speed and torque loads. Different actual current values are measured against correct or nominal values, and compensation factors are permanently stored in the programmable non-volatile memory as calibration parameters used by the microprocessor to provide for calibration of the system to compensate for tolerance variations of internal components. The calibration parameters are selectable from the programmable nonvolatile memory by the parameter select signal or the calibration parameters may be downloaded from the programmable non-volatile memory to the microprocessor without being selected by the parameter select signal, or both.

Considering the above, the Court concludes that "calibrating/calibration parameters" in claims 15-18, 55-57, 59, 61, and 74 should be construed to mean "parameters that are selectable by the parameter select signal from the programmable non-volatile memory, or that are downloaded to the microprocessor without reference to the parameter select signal, or both."

G. "CONTROL CIRCUIT"

Plaintiff argues that "control circuit," as used in claim 63 is indefinite, as it lacks any antecedent basis in the claim, and because there is no reasonable way to ascertain what it means in light of the Specification. Defendant disagrees and argues that "control circuit" refers to "the control" recited

previously in claim 63. The Court agrees with Defendant, and finds that "control circuit," as used in claim 63 refers to "the control" mentioned previously in the claim.

H. "INTERRELATIONALLY CALIBRATING A CONTROL"

Plaintiff argues that "interrelationally calibrating a contol" in claim 63 is ambiguous and indefinite under 35 U.S.C. § 112. Defendant disagrees, and argues that the term should be construed to mean "calibrating a configuration including both a control having a programmable memory and an electronically controlled motor."

There is little dispute between the parties that "interrelationally" adds very little to the construction, and the Court concludes that disregarding it does not detract from accurate claim construction. Plaintiff argues that the term is indefinite; Defendant says that the word can be disregarded because it is only part of the caption, and the term is otherwise easily defined without that word. The Court agrees with Defendant, and will construe "interrelationally calibrating a control" to mean, "calibrating a control having a programmable non-volatile memory and an electronically controlled motor."

I. MEANS-PLUS-FUNCTION CLAIM TERMS

The claims remaining for this Court to construe are all means-plus-function limitations. Such limitations "recite a specified function to be performed rather than the structure, material, or acts for performing that function." IMS Tech., Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1429-30 (Fed. Cir. 2000). As set forth in ¶6 of 35 U.S.C. § 112:

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, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof. "Claim construction of a means-plus-function limitation includes two steps. First, the court must determine the claimed function. Second, the court must identify the corresponding structure in the written description of the patent that performs that function." Applied Med. Res. Corp. v. U.S. Surgical Corp., 448 F.3d 1324, 1332 (Fed. Cir. 2006).

1. Claim Terms for which Defendant Construes to Include Equivalents

There are multiple means-plus-function limitations for which the parties' proposed constructions are actually quite similar. The parties agree on the function of each of these terms, and almost agree on the corresponding structure; the sole dispute is whether to construe the claims in a way that includes equivalents. Defendant seeks to include equivalents by adding "and equivalents thereof" and "including" to the proposed structure. For example, with respect to the claim term, "means for generating a temperature signal representative of the temperature of the air" (claim 60), the parties

agree that the function is "generating a temperature signal representative of the temperature of the air." However Plaintiff's proposed structure is "a thermostat," while Defendant's proposed structure is "the corresponding structure described in the specification includes a thermostat and equivalents thereof." Plaintiff argues that the use of "includes" is vague and will confuse the jury, and that "equivalents" is a term of art that requires proper definition and instruction.[3]

Under 35 U.S.C. § 112, means-plus-function limitations should "be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." As such, it is generally appropriate to include the phrase "and equivalents thereof." See Sipex Corp. v. Maxim Integrated Prods., Inc., 2002 WL 1046699, at *1 (D. Mass. May 24, 2002). The Federal Circuit has, on several occasions, construed means-plus-function limitations to include "equivalents thereof." See, e.g., Animatics Corp. v. Quicksilver Controls, Inc., 102 F.App'x 659, 670 (Fed. Cir. 2004) ("[T]he corresponding structure for 'synchronizing' includes an external computer for inputting commands to the chain of motors, the internal timers of the individual microprocessors, the synchronization pins, and equivalents thereof."); Texas Digital Sys., Inc. v. Telegeneix, Inc., 308 F.3d 1193, 1209 (Fed. Cir. 2002) ("The color control means is limited to this corresponding structure and equivalents thereof."); IMS Tech., Inc. v. Haas Automation, Inc., 206 F.3d 1422, 1432 (Fed. Cir. 2000) ("[W]e conclude that the proper construction of the 'interface means' limitation covers the disclosed structure, which includes the PIA and tape cassette transport, and its equivalents in accordance with § 112, ¶6."). While the Court is receptive to Plaintiff's arguments regarding confusion, the Court believes that any necessary clarifications can be made at the appropriate time. Thus, the Court concludes that the phrases "and equivalents thereof" and "including" shall be included in the corresponding structure of the mean-plus-function limitations, as advocated by Defendant.

2. Claim Terms that Require a Corresponding Algorithm

The next group of means-plus-function limitations are all computer-implemented. "In 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." 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) ("[T]he corresponding structure for a § 112, ¶6 claim for a computer-implemented function is the algorithm disclosed in the specification."). A claim is invalid for indefiniteness under 35 U.S.C. § 112, ¶2 if the patentee fails "to at least disclose the algorithm that transforms the general purpose microprocessor to a 'special purpose computer programmed to perform the disclosed algorithm.'" Aristocrat Tech. Austl. Pty Ltd. v. Int'l Game Tech., 521 F.3d 1328, 1338 (Fed. Cir. 2008) (quoting WMS Gaming, 184 F.3d at 1349). For each of the claim terms discussed in this section, the parties agree that they are computer-implemented means-plus-function limitations, subject to 35 U.S.C. § 112, ¶6, and to the corresponding algorithm requirement set forth above. The parties differ, however, when it comes to the issue of whether the '058 Patent includes the required corresponding algorithm.

This dispute first arises with respect to "means for defining an air flow rate responsive to the parameter select signal," in claim 5, and "means for addressing the memory to select a set of operating parameters for the system corresponding to the defined air flow rate," in claim 6. The parties agree that the recited function for the first claim is "defining an air flow rate responsive to the parameter select signal," and that the recited function for the second claim is "addressing the memory to select a set of operating parameters for the system corresponding to the defined air flow rate." However, Plaintiff argues that the claims are indefinite because there is no corresponding algorithm, while Defendant argues that the applicable algorithm for both claims is:

The microprocessor 102 reads the particular address in the PNV memory 120 corresponding to the air flow rate selected by the parameter select signals. The operating parameters stored at the particular address are used by the microprocessor 102 to control fan speed in response to compressor speed and desired heat output. Microprocessor 102, thus, calculates appropriate air flow rates for given configurations of system 100 from the parameters select signals.

The Court agrees with Plaintiff, and finds that the alleged algorithm cited by Defendant merely "describes the result" of the recited function, which the Federal Circuit has squarely rejected as insufficient.[4] See Aristocrat Tech., 521 F.3d at 1334 (finding that an equation which "describes an outcome, not a means for achieving that outcome" is not an algorithm). Thus, the Court concludes that both "means for defining an air flow rate responsive to the parameter select signal," in claim 5, and "means for addressing the memory to select a set of operating parameters for the system corresponding to the defined air flow rate," in claim 6, are indefinite, and therefore invalid.

Next, the Court will address a group of terms for which Defendant argues that one single algorithm is applicable: "means for selecting stored parameters responsive to the system control signal," in claims 8 and 12; "means, responsive to the selected calibrating parameter and to the system control signal, for generating control signals to control motor speed or torque as a function of the selected calibration parameter and the system control signal," in claim 55; "means, responsive to the stored parameters and to the system control signal, for generating control signals to control motor speed or torque," in claim 61; and "means, responsive to the memory and a system control signal, for controlling motor speed or torque," in claim 62. The parties agree on the recited function for each of these terms, but again they disagree when it comes to the required corresponding algorithm. Plaintiff argues that there is no corresponding algorithm for any of these terms, while Defendant argues that the applicable algorithm for all of the terms is:

The microprocessor 102 generates motor control signals (M.C.S.) via line 110 based on the parameters stored in memory 120 and in response to the parameter select signals thereby controlling the system 100.

The microprocessor 102 receives the system control signals, such as the temperature signal and monitors it to generate the motor control signal provided via line 110 as a function of the system

control signal and the parameter select signal as well as any stored parameters.

Again, the Court is of the opinion that this alleged algorithm does not rise to the level required for computer-implemented means-plus-function limitations. From the above passage, the Court is able to glean only that the microprocessor generates a motor control signal from system control signals received and parameters stored in memory, selected on the basis of parameter select signals received. This explains the function, but fails to explain the methodology through which that function is achieved, resulting in the type of "pure functional claiming" that was rejected in Aristocrat Technologies, 521 F.3d at 1333 ("The point of the requirement that the patentee disclose particular structure in the specification and that the scope of the patent claims be limited to that structure and its equivalents is to avoid pure functional claiming."). The Court concludes that the above passage relied on by Defendant does not disclose the methodology used to select stored parameters (claims 8 and 12), to generate control signals (claims 55 and 61), or to control a motor (claim 62). Thus, the Court concludes that the following terms are indefinite, and therefore, invalid: "means for selecting stored parameters responsive to the system control signal," in claims 8 and 12; "means, responsive to the selected calibrating parameter and to the system control signal, for generating control signals to control motor speed or torque as a function of the selected calibration parameter and the system control signal," in claim 55; "means, responsive to the stored parameters and to the system control signal, for generating control signals to control motor speed or torque," in claim 61; and "means, responsive to the memory and a system control signal, for controlling motor speed or torque," in claim 62.

In sum, the Court concludes that each of the computer-implemented means-plus-function limitations contained in the '058 Patent is invalid for indefiniteness. This outcome is not a rare occurrence, considering that the '058 Patent was filed in 1992, prior to the Federal Circuit's decision in In re Donaldson, 16 F.3d 1189 (Fed. Cir. 1994) (en banc). In Donaldson, the Federal Circuit held that "if one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by the language." Id. at 1195. Thus, "[i]f an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." Id. Plaintiff represented that "[p]rior to Donaldson, prospective patentees . . . commonly failed to include adequate disclosures in their applications." (Pl.'s Response Brief, doc. #46, p.11 n.4).

3. Means for Starting the/said Motor from a Standstill

There are a few means-plus-function limitations remaining that this Court still needs to address. First, the Court will consider the term "means for starting the/said motor from a standstill" in claims 66 and 73. The parties agree on the construction of the function component: "starting the motor from a standstill." They differ, however, when it comes to the corresponding structure. Plaintiff argues that the corresponding structure should be, "the combination of (1) ASIC 112 (using commutation logic 517, zero crossing detection circuit 538), (2) position sensing circuit 126 (including back EMF

sensing circuit 126), (3) the inverter bridge (including gate drives 130 and power switches 124), and (4) motor 114." Defendant argues that the corresponding structure should be, "commutation logic 517, zero crossing detection circuit 538, position sensing circuit 126 (including back EMF sensing circuit 126), inverter bridge (including gate drives 130 and power switches 124) and equivalents thereof."

Column 18, lines 10 through 25 of the Specification instruct that when the motor is at a standstill with no back EMF voltage, the only components of the Application Specification Integrated Circuit (ASIC) mentioned are, as Defendant suggests, Commutation Logic 517 and Zero Crossing Signal Detector 538, both included in Figure 5, introduced at the hearing. Plaintiff's argument that the ASIC is an integrated circuit which must be read into the claim in its entirety is rejected. Defendant was very specific in identifying corresponding structures specifically linked to performing the function. Thus, the Court concludes that the term does not include the motor. The Court will construe the function of "means for starting the/said motor from a standstill" to be "starting the motor from a standstill," and will construe the corresponding structure to be "commutation logic 517, zero crossing detection circuit 538, position sensing circuit 126 (including back EMF sensing circuit 126), inverter bridge (including gate drives 130 and power switches 124) and equivalents thereof."

4. Means for Sequentially Commutating the Windings in a Selected Direction of Rotation

Next, the Court will consider the term "means for sequentially commutating the windings in a selected direction of rotation," also in claims 66 and 73. The parties agree on the construction of the function component: "sequentially commutating the windings in a selected direction of rotation." They differ, however, when it comes to the corresponding structure. Plaintiff argues that the corresponding structure should be, "the combination of (1) ASIC 112 (using commutation logic 517, zero crossing detection circuit 538), (2) position sensing circuit 126 (including back EMF sensing circuit 126), (3) the inverter bridge (including gate drives 130 and power switches 124), and (4) motor 114." Defendant argues that the corresponding structure should be, "commutation logic 517, zero crossing detection circuit 538, position sensing circuit 126 (including back EMF sensing circuit 126), inverter bridge (including gate drives 130 and power switches 124) and equivalents thereof."

This means-plus-function limitation presents the same issues as the previous means-plusfunction limitation. Thus, the Court concludes that Plaintiff reads in limitations not included in the Specification, and that the term does not include the motor. The Court will construe the function of "means for sequentially commutating the windings in a selected direction of rotation" to be "sequentially commutating the windings in a selected direction of rotation," and will construe the corresponding structure to be "commutation logic 517, zero crossing detection circuit 538, position sensing circuit 126 (including back EMF sensing circuit 126), inverter bridge (including gate drives 130 and power switches 124) and equivalents thereof."

5. Means for Defining a Reference Current

The Court will now consider the means-plus-function limitation "means for defining a reference current" in claims 70 and 73. The parties agree that the function is "defining a reference current," but they each propose different corresponding structures. Plaintiff argues that the corresponding structure should be, "the combination of (1) ASIC 112 using D/A converter 435 and (2) current reference circuit 510, responding to IREF in register 504 passed out to it from microprocessor 102 through input/output data lines." Defendant argues that the corresponding structure should be, "the current reference circuit 510, responding to IREF in register 504 passed to it from microprocessor 102 and equivalents thereof."

The assignment for the Court is to define the corresponding structure, which does not include the entire ASIC. Although the Specification says that "ASIC defines reference current," this does not equate to a conclusion that all of the ASIC is the corresponding structure. The Court concludes that the function of "means for defining a reference current" is "defining a reference current," and the corresponding structure is "the current reference circuit 510, responding to IREF in register 504 passed to it from microprocessor 102 and equivalents thereof."

6. Means for Rectifying an AC Supply Voltage

Next, the Court will consider "means for rectifying an AC supply voltage" in claim 3. The parties agree that the function of this limitation is "rectifying an AC supply voltage," in the context of "providing a parameter select signal." Plaintiff argues that the corresponding structure should be "the diode duplexing circuit illustrated in Fig. 2, consisting of a positively biased diode 202, negatively based diode 206, and four field select lines 210, 212, 214, 216." Defendant proposes, "the corresponding structure described in the specification includes: diodes 202, 206, and equivalents thereof." The Court believes that Plaintiff's proposed corresponding structure imports field select lines that are not actually required to perform the rectifying function. The Specification makes clear that these field select lines are used to provide signals to the microprocessor. Thus, the Court concludes that the function of "means for rectifying an AC supply voltage" in claim 3 is "rectifying an AC supply voltage," while the corresponding structure "includes diodes 202, 206, and equivalents thereof."

7. Microprocessor Terms

The final group of terms that this Court must address are terms for which the parties disagree as to whether the rules for means-plus-function limitations apply. These terms are found in claims 1, 60, 68-71, and 74, and all include the phrase, "means, including a microprocessor, for . . . ." Because the terms include the word "means," it can be presumed that the terms are meansplus-function limitations, under 35 U.S.C. § 112, ¶6. Biomedino, LLC v. Waters Techs. Corp., 490 F.3d 946, 950 (Fed. Cir. 2007) ("When a claim uses the term 'means' to describe a limitation, a presumption inheres that the inventor used the term to invoke § 112, ¶6."). However, Defendant argues that the means-plus-function presumption is rebutted because the claim itself contains sufficient structure to

identify the "means." Plaintiff disagrees, and argues that § 112, ¶6 does apply.

Defendant is correct that the presumption discussed above "can be rebutted when the claim, in addition to the functional language, recites structure sufficient to perform the claimed function in its entirety." Biomedino, 490, F.3d at 950. However, the Court agrees with Plaintiff that the rebuttal of the presumption does not apply in this case, due to the inclusion of the word "including" in the applicable claim terms. The Federal Circuit has noted that the word "including" is "an open term," which suggests that "something else is needed" for sufficient structure. Altiris, Inc. v. Symantec Corp., 318 F.3d 1363, 1376 (Fed. Cir. 2003). The Federal Circuit explained, "[i]n cases where we have found sufficient structure in the claims, the claim language specifies a specific physical structure that performs the function." Id. The Court concludes that the term "means, including a microprocessor, for . . ." is a means-plus-function limitation that is subject to 35 U.S.C. § 112, ¶6. Additionally, because the limitation is computer-implemented, there must be an algorithm disclosed in the Patent to perform the claimed function. See WMS Gaming, Inc. v. Int'l Game Tech., 184 F.3d 1339, 1349 (Fed. Cir. 1999) ("In 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.").

In its Opening Claim Construction Brief, Defendant briefly mentions that if the Court finds it necessary to identify an algorithm that corresponds to the "means, including a microprocessor, for . . ." terms, "that algorithm is the same as identified with respect to the terms in section D.1 supra, for the reasons set forth in that section." (Brief, doc. #42, p.23). The section in which Defendant refers is the section that discusses "means, responsive to the selected calibrating parameter and to the system control signal, for generating control signals to control motor speed or torque as a function of the selected calibration parameter and the system control signal," in claim 55. The algorithm Defendant cited for that term was:

The microprocessor 102 generates motor control signals (M.C.S.) via line 110 based on the parameters stored in memory 120 and in response to the parameter select signals thereby controlling the system 100.

The microprocessor 102 receives the system control signals, such as the temperature signal and monitors it to generate the motor control signal provided via line 110 as a function of the system control signal and the parameter select signal as well as any stored parameters.

The Court has already determined that this algorithm merely describes the function, and is the type of "pure functional claiming" rejected by the Federal Circuit in Aristocrat Technologies Australia Pty Ltd. v. International Game Technology, 521 F.3d 1328, 1333 (Fed. Cir. 2008). See supra Section III.I.2. Thus the Court concludes that the terms found in claims 1, 60, 68-71, and 74, which include the phrase, "means, including a microprocessor, for . . . ." are indefinite and, thus, invalid.

IV. CONCLUSION

In summary, the Court concludes that the disputed terms have the following meanings:

1. "Programmable memory" in claims 1, 55, 58-60, 63, 68-71, and 74 means "programmable, non-volatile memory, physically distinct from any ROM or RAM inherent to the microprocessor."

2. "Memory" in claims 6, 15, 16, 19, 23-29, 61, and 62 means "programmable, non-volatile memory, physically distinct from any ROM or RAM inherent to the microprocessor."

3. "Instruction memory" in claims 1, 60, and 71 means "a memory that stores instructions controlling the operation of the microprocessor, separate from programmable memory and memory inherent to the microprocessor."

4. "Receiving a parameter select signal" in claims 58, 59, and 62 requires no definition.

5. "Receiving the system control signal" in claim 62 requires no definition.

6. "System control signal" in claims 1, 8, 10, 12, 55, 58, 59, 61, 62, 68-70, 73, and 74 requires no definition.

7. "Parameter select signal" in claims 1, 2, 3, 5, 55, 58-63, 68-71, and 74 means "an electrical signal that is used to select one or more parameters stored in the programmable non-volatile memory."

8. "System for driving a component of a heating, ventilating, and/or air conditioning (HVAC) system" in claims 1, 58, 73, and 74 requires no definition.

9. "Heating, ventilating, and/or air conditioning (HVAC) system" in claims 1, 58, 73, and 74 requires no definition.

10. "Calibrating/calibration parameters" in claims 15-18, 55-57, 59, 61, and 74 means "parameters that are selectable by the parameter select signal from the programmable nonvolatile memory, or that are downloaded to the microprocessor without reference to the parameter select signal, or both."

11. "Control circuit," in claim 63 refers to "the control" mentioned previously in the claim.

12. "Interrelationally calibrating a control" in claim 63 means "calibrating a control having a programmable non-volatile memory and an electronically controlled motor."

The Court has also concluded that the phrases "and equivalents thereof" and "including" shall be included in the corresponding structure of the mean-plus-function limitations, and that each of the

computer-implemented means-plus-function limitations contained in the '058 Patent (including the microprocessor terms) is invalid for indefiniteness. Finally, the Court construed the following means-plus-function limitations:

1. The function of "means for starting the/said motor from a standstill" in claims 66 and 73 is "starting the motor from a standstill," and the corresponding structure is "commutation logic 517, zero crossing detection circuit 538, position sensing circuit 126 (including back EMF sensing circuit 126), inverter bridge (including gate drives 130 and power switches 124) and equivalents thereof."

2. The function of "means for sequentially commutating the windings in a selected direction of rotation," also in claims 66 and 73 is "sequentially commutating the windings in a selected direction of rotation," and the corresponding structure is "commutation logic 517, zero crossing detection circuit 538, position sensing circuit 126 (including back EMF sensing circuit 126), inverter bridge (including gate drives 130 and power switches 124) and equivalents thereof."

3. The function of "means for defining a reference current" in claims 70 and 73 is "defining a reference current," and the corresponding structure is "the current reference circuit 510, responding to IREF in register 504 passed to it from microprocessor 102 and equivalents thereof."

4. The function of "means for rectifying an AC supply voltage" in claim 3 is "rectifying an AC supply voltage," and the corresponding structure "includes diodes 202, 206, and equivalents thereof."

Accordingly, IT IS HEREBY ORDERED that all terms at issue shall be defined as articulated above. Dated this 2nd Day of February,2011.

1. The '058 Patent is entitled, "CONTROL SYSTEM AND METHODS FOR A MULTIPARAMETER ELECTRONICALLY COMMUTATED MOTOR."

2. "Pohl" refers to U.S. Patent No. 4,653,285. The United States Patent and Trademark Office initially rejected the application for the patent at issue in this case, finding that the Pohl Patent taught each claimed element. General Electric later successfully appealed this finding.

3. This dispute exists with respect to each of the following means-plus-function claim terms: "means for generating a temperature signal representative of the temperature of the air" (claim 60); "means for generating a humidity signal representative of the humidity of the air" (claim 71); "means for modifying the air humidity" (claim 71); "means for modifying the air temperature" (claim 60); "means for receiving a parameter select signal for selecting at least one calibrating parameter stored in the memory" (claims 55, 74); "means for receiving a parameter select signal for selecting at least one parameter stored in the memory" (claims 1, 68-71); "means for receiving a parameter select signal for selecting at least one of the parameters stored in the memory" (claims 60, 61); "means for sensing a position of the rotatable assembly" (claim 22); "means for . . . providing a position signal to the microprocessor, said microprocessor responsive to the position signal" (claim 22); "means for detecting the current in one of the windings" (claim 73); "means

for interfacing the system control signal with said microprocessor" (claim 10); "means for controlling the torque of the motor in response to a difference between the detected current and the reference current" (claim 73); and "means for providing a parameter select signal to the means for receiving a parameter select signal" (claim 2).

4. In its Responsive Claim Construction Brief [doc. #46], Plaintiff includes several examples of algorithms contained in patents that meet the definiteness requirement of 35 U.S.C. § 112, ¶2. Upon review of these algorithms, the insufficiency of the algorithm proposed by Defendant in this case is apparent.