

IN THE UNITED STATES DISTRICT COURT FOR THE
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

REHCO LLC,)	
)	
Plaintiff,)	Case No. 13 C 2245
)	
v.)	
)	Judge John Robert Blakey
SPIN MASTER LTD.,)	
)	
Defendant.)	

MEMORANDUM OPINION AND ORDER

This case is before the Court on claim construction. The parties dispute two claim terms in U.S. Patent No. 7,100,866. After reviewing the parties’ briefs and submissions on claim construction, as well as the patent itself (including the claims, the specification and the prosecution history in the record) the Court construes the disputed claim terms as set forth in this Memorandum Opinion and Order.

Background & Procedural History

A. Rehco and Spin Master

Rehco, LLC is a limited liability corporation, founded by two brothers Steve and Jeff Rehkemper, that invents new products for license primarily in the toy industry. Second Amended Complaint [37], ¶¶1-2. Rehco is recognized by the toy industry as a leader in inventing and innovation; in fact, over the past 30 years, the Rehkemper brothers have invented hundreds of revolutionary products in the toy industry that have resulted in well over a billion dollars in combined sales for clients such as Mattel, Hasbro and Spin Master. *Id.*, ¶¶3-4. In particular, Steve

Rehkemper is the named inventor on over sixty United States patents, and Jeff Rehkemper is the named inventor on over fifty United States patents, including the patent that is the subject of this lawsuit: United States Patent No. 7,100,866 (“the ‘866 Patent”). *Id.*, ¶5. That patent was issued September 5, 2006 and is owned by Rehco. Exhibit 4 [37-2].

Spin Master is the third largest toy company in North America. Its Air Hogs line of radio-controlled flying products is the largest radio-controlled toy brand in the world and is ranked in the top twenty-five of all brands in the toy industry. Amended Complaint [37], ¶¶7-8. In 2008, Spin Master received the coveted Toy Industry Association’s “Toy of the Year” Award for its Air Hogs Havoc Heli Laser Battle radio-controlled helicopter toy, which is one of the products at issue in this lawsuit. *Id.*, ¶9.

On December 21, 2000, Rehco and Spin Master entered into a Rechargeable Radio-Controlled Airplane Development Agreement [37-5]. The parties executed a First Amendment to that Agreement in September 2001 [37-6], a Second Amendment in January 2003 [37-7], and a Third Amendment in March of 2003 [37-8]. Second Amended Complaint [37], ¶¶44-47. The Agreement, together with the Amendments – collectively referred to as the “Airplane Agreement” – granted Spin Master “a sole and exclusive right to manufacture, have manufactured for it, use, sell, distribute and have distributed for it the “Item,” a term described in the agreement as a “Rechargeable Radio Controlled Airplane.” *Id.*, ¶48; Airplane Agreement [37-5], ¶1. In exchange, Spin Master was obligated “to pay Rehco a

royalty of 1.5% on the ‘Net Wholesale Selling Price’ of all sales of the Item”
Second Amended Complaint [37], ¶49. The Airplane Agreement also assigned to Spin Master “the right to change the form of the Item and to produce and sell it under the new form, provided, however, that all provisions of [the Airplane] Agreement shall apply to said new form of the Item.” *Id.*, ¶50.

On September 1, 2001, Rehco and Spin Master entered into a Radio-Controlled Helicopter Agreement [37-1]. They executed a First Amendment to that Agreement in September 2004 [37-2], and a Second Amendment to that Agreement in July 2006 [37-3]. The Agreement, together with the Amendments – collectively, the “Helicopter Agreement” – grants Spin Master “a sole and exclusive license to manufacture, have manufactured for it, use, sell, distribute, and have distributed for it the “Licensed Products.” “Licensed Products” is defined in the Agreement to mean “merchandise based upon, derived from or embodying the Item,¹ including but not limited to merchandise based upon, derived from or embodying the Item’s means for controlling the horizontal stability of the helicopter.” Second Amended Complaint [37], ¶¶20, 23; Helicopter Agreement [37-1], ¶2.g. In exchange for this exclusive license, Spin Master was obligated to pay to Rehco a royalty of 3% on the “Net Wholesale Selling Price of all sales by Spin Master and its Subsidiaries or Affiliates of the Licensed Products.” *Id.*, ¶21.

On September 12, 2008, Rehco terminated the Helicopter Agreement for non-payment. Second Amended Complaint [37], ¶24. Rehco terminated the Airplane

¹Item, another term defined in the agreement, refers to a particular motorized helicopter. [37-1], ¶1.a.

Agreement on May 26, 2013 for non-payment. *Id.*, ¶52.

Rehco initially filed this lawsuit on March 26, 2013 [1], amending its complaint first on April 19, 2013 [16] and again on August 8, 2013 [37]. In the Second Amended Complaint – which is the operative complaint – Rehco alleged breach of contract based on Spin Master’s failure to pay royalties under the Helicopter Agreement (Count I) and the Airplane Agreement (Count III); infringement of the ‘866 patent (Count II); and infringement of U.S. Patent No. 6,612,893 (Count IV). Second Amended Complaint [37]. The Court dismissed Count IV on March 17, 2014 [86]. Thus the only infringement claim remaining in the lawsuit concerns the ‘866 patent.²

With regard to the ‘866 patent, Rehco alleged both direct and indirect infringement. More specifically, Rehco alleged that Spin Master directly infringed one or more claims of the ‘866 patent, including at least claims 1, 2, 10, 11 and 12, by making, using, offering for sale, selling and/or importing auto hover toys that infringe the ‘866 patent. Second Amended Complaint [37], ¶30. Alternatively, Rehco alleged that Spin Master indirectly infringed one or more claims of the ‘866 patent, including at least claims 1, 2, 10, 11 and 12, by inducing others (namely, users of the above products) to use the infringing products in a manner that violates one or more claims of the ‘866 patent. *Id.*, ¶31.

B. The ‘866 Patent and its Prosecution History

² Because the case is presently up on claim construction, the breach of contract claims are relevant only to provide context for the lawsuit. Similarly, the Court does not at this time consider the infringement claim or analyze the allegedly infringing products. Indeed, at this point in the proceedings, the Court does not look at Spin Master at all, but simply focuses its analysis on the patent alleged to be infringed – the ‘866 patent.

The '866 patent relates to hovercraft toys and discloses a "Control System for a Flying Vehicle." The '866 patent's abstract, which is intended to give an overview of the disclosed invention, provides:

In one embodiment of the present invention there is described a vehicle having a propeller mechanism for propelling the vehicle in a horizontal direction. The vehicle includes a transmitter positioned on the bottom of the vehicle for transmitting a signal from the vehicle downwardly away from the vehicle. A receiver is positioned on the bottom of the vehicle for receiving the signal as it is bounced off of a surface, defined as a bounced signal. A control system is also provided that automatically sets a speed of the propeller mechanism in response to the receiver. The control system sets the speed of the propeller mechanism to a first speed when the receiver receives the bounced signal and the control system sets the speed of the propeller mechanism to a second speed when the receiver does not receive the bounced signal. The first speed is predefined as a speed that causes the vehicle to gain altitude, while the second speed is predefined as a speed that causes the vehicle to lose altitude. When the vehicle reaches a predetermined distance away from the surface of the object, the vehicle will hover at the predetermined distance as the control system toggles between the first and second speeds.

U.S. Patent No. 7,100,866, Abstract. The patent as issued recites 17 claims. The disputed claim terms appear in claim 1, which is an independent claim, from which several of the other claims depend.

Rehco filed the application for the '866 patent on January 14, 2005. That application included a different version of claim 1. As originally submitted, claim 1 recited:

1. A vehicle having a means for propelling in a vertical direction, further comprising:
 - a transmitter positioned on the bottom of said vehicle for transmitting a signal from the vehicle downwardly away from said vehicle;
 - a receiver positioned on the bottom of said vehicle for receiving said

signal as it is bounced off of a surface, defined as a bounced signal; and

a control system that automatically sets a speed of the propelling means in response to the receiver, said control system sets the speed of the propelling means to a first speed when the receiver receives the bounced signal and the control system sets the speed of the propelling means to a second speed when the receiver does not receive the bounced signal, the first speed being predefined as a speed that causes the vehicle to gain altitude and the second speed being predefined as a speed that causes the vehicle to lose altitude.

Joint Appendix [93], p. 63.

On February 21, 2006, the primary examiner rejected claims 1-18, on a non-final basis. *See* Office Action Summary [93], pp. 95-99. In response, Rehco amended claims 1, 6 and 17 and resubmitted the application. Claim 1, in its amended form, recited:

1. A vehicle having a means for propelling in a vertical direction, further comprising:

a transmitter positioned on the bottom of said vehicle for transmitting a signal from the vehicle downwardly away from said vehicle;

a receiver positioned on the bottom of said vehicle for receiving said signal as it is bounced off of a surface, defined as a bounced signal; and

a control system that automatically sets a speed of the propelling means in response to the receiver, said control system having a first means to set the speed of the propelling means to a first speed when the receiver receives the bounced signal and the control system having a second means to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal, the first speed being predefined as a speed that causes the vehicle to gain altitude and the second speed being predefined as a speed that causes the vehicle to lose altitude.

Joint Appendix [93], p. 105. With these amendments (and some additional amendments by the examiner, who cancelled claim 16 and made claim 12 depend from claim 1), the claims were allowed. *See* Notice of Allowability [93], pp. 114-119. Prosecution of the patent was then closed, and the patent issued on September 6, 2006.

C. The Parties' Proposed Claim Constructions

1. Spin Master's Proposed Claim Construction

Spin Master argues that, when Rehco filed its patent application for the '866 patent, the hovercraft toy market was crowded and the idea behind the invention was not new. The focus of the '866 patent was the method of controlling the height of the toy above the ground. According to Spin Master, the patent describes a specific series of steps that could be programmed onto a control circuit board that would control the speed of the rotor and allow the toy to move up and down, depending on the height above the ground.

Spin Master argues that, by amending its claims as it did during the prosecution of the '866 patent, Rehco was agreeing to limit its claims to means-plus-function claiming. This means, Spin Master argues, that Rehco claimed its invention in functional terms (i.e., in terms of what the invention does) and is thus limited to the specific structures identified in the patent for performing that function (i.e., how the invention does it). Spin Master argues that Rehco added both of the disputed terms to secure the allowance of the '866 patent and that its decision to use means-plus-function claim limitations necessarily requires that the claims

now be limited to the structure(s) specifically disclosed in the patent specification.

Thus, Spin Master proposes the following construction:

Claim Term	Proposed Construction
<p>“first means to set the speed of the propelling means to a first speed when the receiver receives the bounced signal”</p>	<p><u>Function:</u> “to set the speed of the propelling means to a first speed when the receiver receives the bounced signal”</p> <p><u>Structure:</u> “Circuit board 136 programmed to perform steps 200, 205, 210, 215, 220, 225, and 230 in Fig. 7”</p>
<p>“second means to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal”</p>	<p><u>Function:</u> “to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal”</p> <p><u>Structure:</u> “Circuit board 136 programmed to perform steps 200, 205, 255, 260, 265, 270, 275, and 280 in Fig. 7”</p>

2. Rehco’s Proposed Claim Construction

Rehco concedes that its claims are recited in “means-plus-function” terms. Thus, Rehco acknowledges that the Court must construe the claims to identify both the claimed function and the corresponding structure in the written description for performing that function. Rehco’s Responsive Claim Construction Brief [99], p. 3. Rehco also emphasizes, however, the principle that, when construing a means-plus-function limitation, a court “may not import structural limitations from the written description that are unnecessary to perform the claimed function.” *Id.* (citing *Wenger Manufacturing, Inc. v. Coating Machinery Systems, Inc.*, 239 F.3d 1225, 1233 (Fed. Cir. 2001)). According to Rehco, Spin Master’s proposed construction

does just that. Rehco argues that the '866 patent discloses at least three embodiments, and that defendant's proposed construction improperly limits the claim to the third embodiment and excludes the first and second embodiments – a narrow approach that is contrary to long-standing Federal Circuit precedent. Rehco's Responsive Claim Construction Brief [99], pp. 8-9.

With this in mind, Rehco proposes the following claim construction:

Claim Term	Proposed Construction
<p>“first means to set the speed of the propelling means to a first speed when the receiver receives the bounced signal”</p>	<p><u>Function:</u> “to set the speed of the propelling means to a first speed when the receiver receives the bounced signal”</p> <p><u>Structure:</u> “Circuit board 136 programmed to set the speed of the propelling means to a first speed when the receiver receives the bounced signal and equivalents thereof”</p>
<p>“second means to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal”</p>	<p><u>Function:</u> “to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal”</p> <p><u>Structure:</u> “Circuit board 136 programmed to set the speed of the propelling means to a second speed when the receiver receives the bounced signal and equivalents thereof”</p>

Discussion

A. Applicable Legal Standards

Because the claims of a patent define the invention, claim construction – the process of giving meaning to the claim language – defines the scope of the invention. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005)(*en banc*) (“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.’”)(citation omitted). Claim construction is a matter of law for the Court to determine. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 391 (1996); *Marine Polymer Techs., Inc. v. HemCon, Inc.*, 672 F.3d 1350, 1357-58 (Fed. Cir. 2012).

The claim construction analysis begins with the words of the claims themselves, giving those words their ordinary and customary meaning, which is the “meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1312-13; *see also InterDigital Commc’ns, LLC v. Int’l Trade Commc’n*, 690 F.3d 1318, 1324 (Fed. Cir. 2012). Thus, in interpreting claims, a court “should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history.” *Wenger Manufacturing, Inc. v. Coating Machinery Systems, Inc.*, 239 F.3d 1225, 1232 (Fed. Cir. 2001)(quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the

context of the entire patent, including the specification.” *Phillips*, 415 F.3d at 1315.

A “district court’s construction of a patent claim, like a district court’s interpretation of a written instrument, often requires the judge only to examine and to construe the document’s words without requiring the judge to resolve any underlying factual disputes.” *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, --- U.S. ---, 135 S.Ct. 831, 840-41 (2015). “In some cases, however, the district court will need to look beyond the patent’s intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period.” *Id.* Although “less significant than the intrinsic record,” extrinsic evidence, which consists of “all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises,” may “shed useful light on the relevant art.” *See Phillips*, 415 F.3d at 1317 (citations omitted); *see also HTC*, 667 F.3d at 1277 (“A court may also look to extrinsic evidence, such as dictionaries and expert opinions.”)(citing *Phillips*, 415 F.3d at 1317). Before considering extrinsic evidence to construe a disputed claim, however, courts must first examine the intrinsic evidence. *Phillips*, 415 F.3d at 1317-19. If a term is ambiguous based on the intrinsic record, reliance on extrinsic evidence is then appropriate. *See Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1360 (Fed. Cir. 2013)(citing *Phillips*, 415 F.3d at 1317)(“Where the intrinsic record is ambiguous, and when necessary, we have 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”).

B. Analysis of the Disputed Claim Terms

Means-plus-function claiming occurs when a claim term is drafted in a manner that invokes 35 U.S.C. § 112, ¶ 6, which states: “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.” The question of whether certain claim language invokes 35 U.S.C. §112, ¶6 is an exercise of claim construction and is therefore a question of law. *Wenger*, 239 F.3d at 1231.

The parties agree that the claim language at issue invokes §112, ¶6, and the Court agrees with the parties that the disputed claim language should be construed as a means-plus-function limitation under §112, ¶6. The claim limitation’s use of the word “means” creates a presumption that this section applies. *E.g.*, *Wenger*, 239 F.3d at 1232 (citing *Personalized Media v. Int’l Trade Comm’n*, 161 F.3d 696, 703 (Fed. Cir. 1998)). And, here, the claim also recites a function corresponding to the means – namely, “to set the speed of the propelling means to a first speed when the receiver receives the bounced signal” (first means) and “to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal” (second means). ‘866 patent, col. 7, line 65-col. 8, line 3. Thus, the Court construes the claim under §112, ¶6.

Construing a means-plus-function claim term is a two-step process: the Court must first identify the claimed function and must, second, determine what structure, if any, disclosed in the specification corresponds to the claimed function. *Noah Systems, Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012)(citing *Applied Medical Resources Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1332 (Fed. Cir. 2006)). *See also Wenger*, 239 F.3d 1233 (“In construing a means-plus-function limitation, a court must identify both the claimed function and the corresponding structure in the written description for performing that function.”)(citing *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999)). “A structure disclosed in the specification qualifies as a ‘corresponding structure’ if the specification or the prosecution history ‘clearly links or associates that structure to the function recited in the claim.’” *Noah Systems*, 675 F.3d at 1311 (quoting *B. Braun Medical, Inc. v. Abbott Laboratories*, 124 F.3d 1419, 1424 (Fed. Cir. 1997)). “Under §112, ¶6, a court may not import functional limitations that are not recited in the claim, or structural limitations from the written description that are unnecessary to perform the claimed function.” *Wenger*, 239 F.3d at 1233 (citing *Micro Chem.*, 194 F.3d at 1258).

Here, the parties agree that the claimed function of the “means for propelling in a vertical direction,” is to propel the vehicle in a vertical direction. They also agree that the corresponding structure that performs this function is “a single rotor assembly, a single rotor assembly and a separate counter-torque assembly, or a counter-rotating assembly, and equivalents thereof.” Joint Claim Construction

Chart [104], p. 1. With respect to the “first means to set the speed of the propelling means to a first speed when the receiver receives the bounced signal,” the parties agree that the claimed function is “to set the speed of the propelling means to a first speed when the receiver receives the bounced signal.” *Id.* And with respect to the “second means to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal,” the parties agree that the claimed function is “to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal.” Joint Claim Construction Chart [104], p. 2.

The parties disagree, however, about which structures disclosed in the specification correspond to the claimed functions. Spin Master argues that the corresponding structure for the first means function is a circuit board – Circuit Board 136 – programmed to perform all of the steps shown in the top half of Figure 7 (namely, steps 200, 205, 210, 215, 220, 225 and 230 in Figure 7). *Id.*, p. 2. Rehco argues that the structure is a circuit board – Circuit Board 136 – programmed to set the speed of the propelling means to a first speed when the receiver receives the bounced signal and equivalents thereof.” *Id.*, p. 2.

Similarly, with respect to the second means function, Spin Master argues that the structure is Circuit Board 136 programmed to perform the steps delineated in Figure 7 when the receiver’s output equals no surface detected – namely, steps 200, 205, 255, 260, 265, 270, 275, and 280. *Id.* Rehco argues that the structure is “Circuit Board 136 programmed to set the speed of the propelling means to a second

speed when the receiver receives the bounced signal and equivalents thereof.” *Id.*

Essentially, the parties’ dispute comes down to whether Figure 7 represents the sole embodiment of the claimed structure. Spin Master’s proposed construction of the corresponding structures for the first means function and the second means function necessarily incorporate each and every one of the steps described in the corresponding part of Figure 7. Rehco’s proposed construction is broader, encompassing some of those steps in every embodiment but not necessarily encompassing all of those steps in each and every embodiment. The Court finds that Rehco’s proposed construction is consistent with the language of the specification and the claims; Spin Master’s is not.

As explained, claim 1 discloses:

A vehicle having a means for propelling in a vertical direction, further comprising:

a transmitter positioned on the bottom of said vehicle for transmitting a signal from the vehicle downwardly away from said vehicle;

a receiver positioned on the bottom of said vehicle for receiving said signal as it is bounced off of a surface, defined as a bounced signal; and

a control system that automatically sets a speed of the propelling means in response to the receiver, **said control system having a first means to set the speed of the propelling means to a first speed when the receiver receives the bounced signal and the control system having a second means to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal**, the first speed being predefined as a speed that causes the vehicle to gain altitude and the second speed being predefined as a speed that causes the vehicle to lose altitude.

'866 Patent, col. 7, line 55 – col. 8, line 6 (emphasis added to highlight disputed claim terms). Claim 1 does not disclose the Circuit Board 136 or any programming for that Circuit Board. The specification and the drawings, however, provide further detail concerning the control system disclosed in claim 1.

The specification and the drawings show that the “Circuit Board 136” is part of the “control system” disclosed in the patent. Figures 3a, 3b and 3c all show the circuit board as part of the control system. The specification discusses the circuit board in some detail. It states:

Once the vehicle is activated, through a remote control or an on switch, the circuit board sends the vehicle into a climbing phase, by increasing the rotor speed to the climbing speed. In addition, the circuit board begins transmitting a signal. When the vehicle is close to a surface or object, the receiver will receive the transmission signal that is bounced off of the surface. As long as the receiver receives the signal, the circuit board maintains a climbing phase (Fig. 3a). As the vehicle moves further from the surface, the receiver will eventually lose the signal that is bounced off of the surface. At the moment the receiver loses the signal, the circuit board will switch to the fall speed and enter a deceleration phase. The control system may also decrement to the deceleration speed in steps, so the movement of the vehicle is not too severe. As the receiver regains the signal connection, the circuit board switches back to the climbing phase (again the control system may increment from the deceleration speed to the climbing speed to control the movement of the vehicle). Eventually, the vehicle will toggle back and forth between the deceleration and climbing phase as the signal strength rests on the fringe of being received and not received.

U.S. Patent No. 7,100,866, col. 3, line 65-col. 4, line 19. This description explains the function the Circuit Board serves and, read along with the drawings, explains the steps in the process. This is the description of the corresponding structure.

The specification goes on to discuss a preferred embodiment:

In the preferred embodiment, the transmitter transmits an infra-red frequency signal. The circuit board monitors the receiver's output in that upon detecting the signal bounced off of a surface the receiver's output is off (referred to as surface detected) and upon not detecting the signal the receiver's output is on (referred to as no surface detected). When the surface is detected for a predetermined time the propelling means is set to the climb speed and when the surface is not detected for a predetermined time the propelling means is set to the fall speed. Moreover, whenever there is a change in the receiver's output (from surface detected to surface not detected or vice versa) the propelling means is set to the hover speed.

'866 Patent, col. 4, lines 20-32. The specification then explains Figure 7, which "illustrates a process of controlling the vehicle." *Id.*, col. 4, line 33.

The process initially resets a timer, Step 200. The timer is used to time how long the receiver's output has been in a particular state. The receiver's output is monitored and checked to determine if a surface is detected, Step 205. If the receiver's output does not indicate a surface is detected, then the process goes to Step 255, where the output must be no surface detected.

Continuing from Step 205, the receiver's output is continually monitored to determine if there has been a change, Step 210. If there has been a change, the propelling means 110 is set to hover speed and the timer is reset, Step 215. Since the receiver's output changed from surface detected to no surface detected, the process moves from Step 215 (out of the surface detected section) to Point A (into the no surface detected section, discussed in further detail below).

From Step 210, if the receiver's output has not changed, the process checks to see if the time is equal to a predetermined set time, Step 220. If the timer is not equal to the predetermined set time, then the process increments the timer, Step 225, and moves back to Step 210. If the timer is equal to the predetermined set time, then the propelling means 110 is set to the climb speed, Step 230.

Following Step 255 or Point A, when the receiver's output equals no surface detected, the receiver's output is checked to determine if there has been a change 260. If there has been a change in the output, the propelling means is set to hover speed and the time is reset, Step 265. Since the receiver's output changed, from no surface detected to surface detected, the process moves from Step 265 (out of the surface detected section) to Point B (into the surface detected section).

From Step 260, if the receiver's output has not changed, the process checks to see if the time is equal to a predetermined set time,

Step 270. If the timer is not equal to the predetermined set time, then the process increments the timer, Step 275, and moves back to Step 260. If the timer is equal to the predetermined set time, then the propelling means 110 is set to the fall speed, Step 280. The process then goes back to Step 260 to monitor the output.

‘866 Patent, col. 4, line 33 – col. 5, line 4.

The Court finds that this latter description, which describes the process illustrated by Figure 7, is a preferred embodiment and not, as Spin Master argues, the proper construction for the corresponding structure.

The intrinsic evidence does not support Spin Master’s position. First, the structure referenced in claim 1 (the control system) does not reference Figure 7, and Figure 7 includes several steps that are not disclosed in claim 1. Most significantly, the timing element incorporated into Figure 7 and discussed in the specification is not disclosed in claim 1. In fact, the timing element is first disclosed in claim 5, which depends from claim 1. Claim 5 discloses: “[t]he vehicle of claim 1, wherein the control system further includes a means to increment the first speed and second speed as functions of time.” ‘866 Patent, col. 8, lines 21-23.

“[T]he examination of other claims in a patent may provide guidance and context for interpreting a disputed means-plus-function limitation, especially if they recite additional functions.” *Wenger Mfg.*, 239 F.3d at 1234. The doctrine of claim differentiation provides that, as a general rule, each claim in a patent is presumed to have a different scope. *E.g.*, *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006); *Versa Corp. v. Ag-Bag Int’l Ltd.*, 392 F.3d 1325, 1330 (Fed.Cir. 2004). The doctrine “stems from ‘the common sense notion that

different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.” *Seachange Int’l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1368-69 (Fed. Cir. 2005)(quoting *Karlin Tech. Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971-72 (Fed.Cir. 1999)). The doctrine is most compelling “where the limitation sought to be ‘read into’ an independent claim already appears in a dependent claim,” *Seachange*, 413 F.3d at 1368-69 (quoting *Liebel–Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed.Cir. 2004)). Although it is true that the doctrine “only creates a presumption that each claim in a patent has a different scope” and is “not a hard and fast rule of construction.” *Seachange*, 413 F.3d 1369 (quoting *Kraft Foods, Inc. v. Int’l Trading Co.*, 203 F.3d 1362, 1368 Fed. Cir. 2000)), the Court finds that it applies here. Reading claim 5 into claim 1, as Spin Master’s construction does, adds a component that simply is not disclosed in claim 1 and is not present in at least of the embodiments described in the specification. Accordingly, the Court rejects Spin Master’s construction.

This conclusion is similarly support by the specification, which expressly disclaims any intent to limit the control system disclosed in claim 1 to the circuit board shown in Figure 7. The specification itself is clear that Figure 7 is just one embodiment of the claimed invention and is not intended as the only possible structure disclosed in the patent. In the “Detailed Description of the Invention” section of the specification, the ‘866 patent states:

While the invention is susceptible to embodiments in many different forms, there are shown in the drawings and will be described herein, in detail, the preferred embodiments of the present invention. It should be understood, however, that the present disclosure is to be considered

an exemplification of the principles of the invention, and is not intended to limit the spirit or scope of the invention and/or the embodiments illustrated.

'866 patent, col. 2, line 63-col. 3, line 3. Farther on, the specification states: “[f]rom the foregoing and as mentioned above, it will be observed that numerous variations and modifications may be effected without departing from the spirit and scope of the novel concept of the invention. It is to be understood that no limitation with respect to the specific methods and apparatus illustrated herein is intended or should be inferred.” ‘866 Patent, col. 7, lines 48-53. The specification and description of the preferred embodiments make clear that Figure 7 shows a *preferred* embodiment, not *the only* embodiment. The specification states that Figure 7 “illustrates a *process* of controlling the vehicle,” not *the process* for controlling the vehicle. ‘866 Patent, col. 4, line 33.

Spin Master suggests that Rehco’s proposed construction does not pass muster under *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371 (Fed. Cir. 2009). In that case, the Federal Circuit considered the adequacy of the disclosure for an “access control manager” limitation in a means-plus-function claim. There, the patentee argued that the access control manager could be “any computer-related device or program that performs the function of access control.” *Blackboard*, 574 F.3d at 1383. The Federal Circuit held that this type of disclosure was insufficient because “[b]y failing to describe the means by which the access control manager will create an access control list, Blackboard has attempted to capture any possible means for achieving that end.” *Id.* at 1385. Citing *Net MoneyIN, Inc. v. VeriSign*,

Inc., 545 F.3d 1359, 1367 (Fed. Cir. 2008), the court in *Blackboard* held that 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.” *Id.* at 1384. Rehco is not claiming a general purpose computer or a generic circuit board; rather, it is claiming Circuit Board 36 programmed to achieve the function disclosed in the patent, according to the process described in the specification. Rehco’s disclosure of the corresponding structure is consistent with *Blackboard*.

When a patentee employs means-plus-function language in a claim, he “must set forth in the specification an adequate disclosure showing what is meant by that language.” *Default Proof Credit Card System, Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005). “The requirement that the claims ‘particularly point[] out and distinctly claim[]’ the invention is met when a person experienced in the field of the invention would understand the scope of the subject matter that is patented when reading the claim in conjunction with the rest of the specification.” *Id.* (quoting *S3 Inc. v. nVIDIA Corp.*, 259 F.3d 1364, 1367 (Fed. Cir. 2001)).

Here, the testimony and declarations of the parties’ experts may be “useful to confirm that the construed meaning is consistent with the denotation ascribed by those in the field of the art,” but it may “not be used to vary the plain language of the patent document.” *Default Proof*, 412 F.3d at 1298 (*Omega Engineering, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1332 (Fed. Cir. 2003)).

In support of its argument that the corresponding structure is the Circuit Board disclosed in Figure 7 alone, Spin Master offers the declaration of its expert, Dr. Mark E. Campbell. Dr. Campbell analyzed the '866 patent, searching for disclosure of algorithms that, to those skilled in the art, clearly corresponded to the claimed functions of the “first means” and “second means” limitations, and opined that “the circuit board in 136 must [be] programmed according to the algorithms identified in Figure 7, which are the only algorithms corresponding to the claimed functions disclosed in the specification” Campbell Declaration [94-1], ¶19. Yet Dr. Campbell conceded at his deposition that he would be able to program the Circuit Board to perform the recited function without the timing element. Campbell Deposition [99-2], p. 23. This undermines Spin Master’s argument that the '866 patent would not allow one skilled in the art to program the Circuit Board 136 to perform the claimed function without incorporating each and every step in Figure 7.

In contrast, Rehco’s expert, Matthew Spenko, opined that the structure that corresponds to the recited function of the first means is the Circuit Board 136 programmed “to set the speed of the propelling means to a first speed when the receiver receives a bounced signal,” and the structure that corresponds to the recited function of the second means is the Circuit Board 136 programmed “to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal.” Spenko Declaration [99-1], ¶¶21-22, 27-28. Dr. Spenko opined that the algorithm for the Circuit Board 136 for the first means function is: step 205, step 210, step 230 and step 210. Spenko Declaration, ¶27. He opined that

the algorithm for the Circuit Board 136 for the second means functions is: step 255, step 260, step 280, step 260. *Id.*, ¶28. This is consistent with the process described in the specification at col. 3, line 65 – col. 4, line 19. And, unlike Spin Master’s proposed construction, this construction is also consistent with the language of the specification that disclaims any intent to limit the claimed structure to that disclosed in Figure 7.

Spin Master relies on *Nomos Corp. v. Brainlab USA, Inc.*, 357 F.3d 1364 (Fed. Cir. 2004) to support its argument that the corresponding structure is limited to the structure disclosed in Figure 7. Reply [103], p. 4. In that case, only one embodiment was described in the patent. *Id.*, 1368. That is not the case here. Indeed, as shown above, the ‘866 patent describes several embodiments, including an embodiment that is broader than the embodiment shown in Figure 7, and specifically notes that the embodiment disclosed in Figure 7 is just one embodiment.

In arguing that Figure 7 necessarily defines the corresponding structure, Spin Master impermissibly reads into claim 1 additional limitations that are neither disclosed nor necessary to the performance of the claimed function. The Court “may not import structural limitations from the written description that are unnecessary to perform the claimed function.” *Id.* (citing *Wenger Manufacturing*, 239 F.3d at 1233). Spin Master’s expert conceded at his deposition that he would be able to program the Circuit Board to perform the recited function without the timing element. Campbell Deposition [99-2], p. 23. If it is not necessary to perform the function, then it may not be read into the structure. Spin Master’s proposed

construction violates this principle. Rehco's does not.

Based upon the plain language of the claims and the specification, the Court finds that the corresponding structure disclosed in the '866 patent to perform the function of setting the speed of the propelling means to a first speed when the receiver receives the bounced signal is Circuit Board 136 programmed to set the speed of the propelling means to a first speed when the receiver receives the bounced signal. Additionally, the Court finds that the corresponding structure disclosed in the '866 patent to perform the function of setting the speed of the propelling means to a second speed when the receiver does not receive the bounced signal is Circuit Board 136 programmed to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal.

Conclusion

For the reasons explained above, the Court finds that Spin Master's proposed construction defines too narrowly the "structure" disclosed in the patent that is necessary to perform the claimed function. Spin Master's proposed construction impermissibly imports an embodiment from the specification to limit the claim terms and improperly imposes on claim 1 a limitation that is not recited there. In contrast, Rehco's proposed construction is consistent with the claim language, specification and prosecution history of the patent in suit. It is also most consistent with the extrinsic evidence in the record. Accordingly, the Court rejects Spin Master's proposed construction and adopts Rehco's proposed construction.


The Court construes the disputed claim terms as follows:

Disputed Claim Term	Court's Construction
<p>“first means to set the speed of the propelling means to a first speed when the receiver receives the bounced signal”</p>	<p>Function: to set the speed of the propelling means to a first speed when the receiver receives the bounced signal</p> <p>Structure: Circuit Board 136 programmed to set the speed of the propelling means to a first speed when the receiver receives the bounced signal or equivalents thereof</p>
<p>“second means to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal”</p>	<p>Function: to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal</p> <p>Structure: Circuit Board 136 programmed to set the speed of the propelling means to a second speed when the receiver does not receive the bounced signal or equivalents thereof</p>

Additionally, consistent with the Court's prior Orders, the parties are to complete all fact discovery by January 22, 2016. The case is set for a status hearing January 21, 2016 at 9:45 a.m. in Courtroom 1725.

Dated: December 11, 2015

ENTERED:



 John Robert Blakey
 United States District Judge