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IN THE UNITED STATES DISTRICT COURT

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FOR THE DISTRICT OF ARIZONA

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9 Safegate Airport Systems, Inc., a Minnesota
10 corporation; and Safegate International AB,
a corporation of Sweden,

No. CV-13-00567-PHX-GMS

11

Plaintiffs/Counterdefendants,

ORDER

12

v.

13

14 RLG Docking Systems, Inc., an Arizona
corporation; and Robert L. Gaugenmaier,
individually,

15

Defendants/Counterclaimants.

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Pending before this Court are the briefs addressing claim construction. (Docs. 70–
18 73.) The Court held a *Markman* Hearing on April 25, 2014, at which the parties presented
19 additional arguments. The parties then submitted proposed orders. (Docs. 76–78.) For the
20 reasons set forth below, the Court makes the following construction and interpretation of
21 the meaning of the disputed claims.

22

BACKGROUND

23

24 Plaintiffs Safegate Airport Systems, Inc., and Safegate International AB
(collectively “Safegate”) have patents covering both a device and a method used to assist
25 pilots in precisely parking aircraft at a terminal. Those patents are: US Patent 6,023,665
26 (‘665) (Doc. 21, Ex. A) and US Patent 6,324,489 (‘489) (Doc. 21, Ex. B). Safegate’s
27 complaint alleges that Defendant RLG Docking Systems (“RLG”) is infringing on Claim
28 14 of the ‘665 patent and Claims 1 and 11 from the ‘489 patent.

28

1 The ‘665 and ‘489 patents cover a system that assists pilots in safely docking
2 aircraft at a gate. That system provides guidance to the pilot by using a Laser Range
3 Finder (“LRF”) to identify and monitor the position of an approaching aircraft. The
4 system identifies the model of aircraft by matching certain aircraft features, such as the
5 shape or location of the nose, tail, wing, or engine, to a database of aircraft profile
6 information. It then calculates and identifies the proper track and stopping point and
7 guides the pilot through safely docking the aircraft. The primary difference between the
8 ‘665 and the ‘489 patents is that the later issued patent, ‘489, uses a second feature match
9 to further identify an incoming aircraft and resolve any ambiguity about the exact type
10 and dimensions of the approaching aircraft. The ‘489 patent also includes claims
11 covering a method of docking an aircraft as just described, as opposed to an apparatus
12 claim.

13 The parties are disputing the meaning of multiple terms contained in three
14 independent claims. The full text of Claim 14 of the ‘665 patent, with disputed phrases
15 underlined, is as follows:

16 14. A system for tracking an incoming object comprising:
17 means for generating light pulses;
18 means for projecting said pulses outwardly onto an incoming
19 object and for reflecting said light pulses off said object;
20 means for collecting the light pulses reflected off of said
21 object;
22 means for detecting the position relative to an imaginary axial
23 line projecting from a predetermined point and for
24 detecting the distance between said object and said
25 predetermined point whereby tracking of the location of
26 said object is enabled; wherein
27 a comparison table is generated reflecting information about
28 the laser scan and is compared with a profile table
 indicating the shape of known objects;
 a distance distribution table is generated recording the
 distribution of distances from the nose of the object to the
 measuring device for each reflected pulse; and.
 an average distance to a desired stopping position is
 calculated.

The parties agree on the interpretation of the phrases “means for generating light pulses”

1 and “means for collecting the light pulses reflected off of said object.” Both phrases are
2 means-plus-function claim limitations and the structure that performs the recited function
3 is an LRF. (Doc. 67 at 3.)

4 The full text of Claim 1 from the ‘489 patent, with disputed phrases underlined, is
5 as follows:

- 6 1. A system for determining whether a detected object is a known
7 object, the known object having a known profile and also having
8 a known feature at a known location, the system comprising:
9 projecting means for projecting light pulses onto the detected
10 object;
11 collecting means for collecting light pulses reflected off the
12 detected object and for detecting a shape of the detected
13 object in accordance with the light pulses;
14 comparing means for comparing the detected shape with a profile
15 corresponding to the known shape and for determining
16 whether the detected shape corresponds to the known shape;
17 and
18 identifying means for identifying whether the detected object is
19 the known object by determining whether the detected object
20 has the known feature at the known location.

21 The parties agree on the interpretation of the phrase “collecting means for collecting light
22 pulses reflected off the detected object and for detecting a shape of the detected object in
23 accordance with the light pulses.” It is means-plus-function claim limitations and the
24 structure that performs the recited function is an LRF. (Doc. 67 at 3.)

25 The full text of the Claim 11 from the ‘489 patent, with disputed phrases
26 underlined, is as follows:

- 27 11. A method for determining whether a detected object is
28 a known object, the known object having a known profile and
also having a known feature at a known location, the method
comprising:
(a) projecting light pulses onto the detected object;
(b) collecting light pulses reflected off the detected object
and for detecting a shape of the detected object in
accordance with the light pulses;
(c) comparing the detected shape with a profile
corresponding to the known shape and for determining
whether the detected shape corresponds to the known

1 shape; and
2 (d) identifying whether the detected object is the known
3 object by determining whether the detected object has the
4 known feature at the known location.

5 The parties do not agree on the interpretation of any portion of Claim 11 and Safegate
6 does not believe that any terms in the claim require construction. (Doc. 67 at 3, 9–10.)

7 The disputed claims are now fully briefed and the parties were given an
8 opportunity to present further arguments at a *Markman* hearing on April 25, 2014 and to
9 propose orders.

10 **DISCUSSION**

11 **I. Legal Standard**

12 A patent includes two basic components: (1) a written description of the invention,
13 which is referred to as the “specification” of the patent, and (2) the patent claims. The
14 claims of a patent define the scope of the invention to which the patentee is entitled.
15 *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005); *see also Vitronics Corp. v.*
16 *Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The purpose of claim
17 construction is to “determin[e] the meaning and scope of the patent claims asserted to be
18 infringed.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en
19 banc), *aff’d* 517 U.S. 370 (1996). Claim construction is exclusively within the province
20 of the Court. *Markman*, 517 U.S. at 372. If a disputed claim term has a plain and ordinary
21 meaning such that it needs no clarification or explanation, the Court need not adopt a
22 construction beyond that plain meaning. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103
23 F.3d 1554, 1568 (Fed. Cir. 1997).

24 When construing a patent’s claims, the words of a claim are generally given their
25 ordinary and customary meaning. *Phillips*, 415 F.3d at 1312. The ordinary and customary
26 meaning of a claim term is the meaning that the term would have to a person of ordinary
27 skill in the art in question at the time of the invention, read “not only in the context of the
28 particular claim in which the disputed term appears, but in the context of the entire
patent, including the specification.” *Id.* at 1313. Claims should be considered as a whole,

1 and terms used in multiple claims should be construed consistently. *Inverness Med. Switz.*
2 *BmbH v. Princeton Biomeditech Corp.*, 309 F.3d 1365, 1371 (2002).

3 When construing the claims, the Court should look first and primarily to the
4 intrinsic evidence of the patent, which includes the claims, specification, and prosecution
5 history. *Id.* The claims can provide substantial guidance by showing how the disputed
6 words are used in context. *Id.*

7 The specification is the primary basis for claim construction and the best source
8 for understanding a technical term in the proper context. *Id.* at 1315. The specification
9 may narrow the scope of a disputed claim term if the patentee has “demonstrate[d] intent
10 to deviate from the ordinary and accustomed meaning of a claim term by including in the
11 specification expressions of manifest exclusion or restriction, representing a clear
12 disavowal of claim scope.” *Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362,
13 1365 (Fed. Cir. 2012), (quoting *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313,
14 1325 (Fed. Cir. 2002)). In ascertaining whether the patentee has disavowed the full scope
15 of a claim, the Court must not read limitations from the specification into the claims.
16 *Teleflex*, 299 F.3d at 1326 (citing *Comark Commc’ns, Inc. v. Harris Corp.*, 156 F.3d
17 1182, 1186 (Fed. Cir. 1998)). In other words, the claims are not necessarily limited to the
18 embodiments disclosed in the specification. *See SRI Int’l v. Matsushita Elec. Corp. of*
19 *Am.*, 775 F.2d 1107, 1121 n.14 (Fed. Cir. 1985) (en banc).

20 In addition to the specification and the claims themselves, the Court should also
21 consider the patent’s prosecution history, although it can be less useful. *Id.* at 1317. “The
22 purpose . . . is to ‘exclude any interpretation that was disclaimed during prosecution.’”
23 *Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005) (citation omitted). The
24 prosecution history may reveal that the patentee “has unequivocally disavowed a certain
25 meaning to obtain [its] patent.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324
26 (Fed. Cir. 2003). Thus, the Court examines both the specification and prosecution history
27 to ascertain whether the patentee has disavowed some portion of the full and ordinary
28 scope of a claim term.

1 Extrinsic evidence may also be used to assist the Court’s claim construction.
2 Extrinsic evidence consists of all evidence external to the patent and prosecution history,
3 including expert and inventor testimony, dictionaries, learned treatises, and other patents.
4 *Phillips*, 415 F.3d at 1317. Although extrinsic evidence can shed useful light, it is less
5 significant than the intrinsic record. *Id.* Extrinsic evidence must not be used to vary or
6 contradict claim terms. *Vitronics*, 90 F.3d at 1584.

7 Here, many of the disputed terms are part of means-plus-function claims. “Use of
8 the term ‘means’ generally invokes § 112 . . . and [a] claim’s recitation of functional but
9 not structural language keeps it within the statute’s purview.” *Cardiac Pacemakers, Inc.*
10 *v. St. Jude Med., Inc.*, 296 F.3d 1106, 1113 (Fed. Cir. 2002). Claim construction of a
11 mean-plus-function limitation is a two-step process. *Id.* First, the court must identify the
12 claimed function and construe it to include only the limitations contained in the claim
13 language. *Id.* Ordinary claim construction principles should be used and it is improper to
14 narrow or broaden the scope of that function beyond its language. *Id.*

15 After construing the function, the second step is to determine the structure from
16 the specification that corresponds to that claimed function. *Id.* The specification must
17 associate the structure with performance of the function in a way that would be clear
18 from the perspective of a person of ordinary skill in the art. *Id.* One or more embodiments
19 may disclose corresponding structure, but if no embodiment does so, the claim is invalid
20 because it fails to satisfy the definiteness requirement. *Id.* at 113–14.

21 **II. Construction of Disputed Terms.**

22 **A. Claim 14 of the ‘665 Patent**

23 **1. Means for Projecting**

24 Safegate argues that “means for projecting” should be construed as “mirror” and
25 RLG argues that it should be construed as a “[m]eans of using 2 mirrors (one for
26 horizontal scan, one for vertical scan), each mirror separately controlled by a step motor.”

27 Because this is a means-plus-function claim, the first prong is to determine the
28 claimed function. The parties agree that an LRF is used to both generate and collect the

1 light pulses in the first and third steps of Claim 14. The parties agree that the function of
2 the “means for projecting” is “[for projecting] said pulses outwardly onto an incoming
3 object and for reflecting said light pulses off said object.” (Doc. 67 at 4.) In other words,
4 the means for projecting needs to be able to take the light pulses generated by the LRF in
5 the first step of Claim 14 and “project” them onto the plane. It also must be able to
6 “reflect” the light pulses off the plane so that they can be collected by the LRF in step
7 three of Claim 14.

8 The second prong is to look for a corresponding structure in the specification that
9 performs that function. The parties do not dispute that in the specification the projecting
10 is accomplished by a mirror or system of mirrors and that at least one mirror is needed to
11 perform the function of projecting the pulses from the LRF outward onto a plane and
12 reflecting them off the plane. This is also consistent with the language of the
13 specification, which explains that the object of the invention is accomplished by
14 “employing light pulses such as laser pulses projected, for example, off of mirrors in the
15 direction of an incoming object.” (‘665 Patent Column 2 Line 46–52.)

16 The specification contains only one embodiment of the invention, and the structure
17 that corresponds with the projecting function is a set of two mirrors controlled by step
18 motors. (‘665 Patent Column 5 Line 46–53.) These two mirrors are used to control the
19 vertical and horizontal scanning of the LRF. (*Id.*) However, the specification does not
20 contain limiting language that states that two mirrors must be used to perform the
21 tracking that is covered by Claim 14. (*Id.*) In fact it explains that “[i]n the preferred
22 embodiment, the LRF **20** does not move. The scanning by the laser is done with mirrors.”
23 (*Id.*) That language would imply to a person of ordinary skill in the art that there could be
24 another, non-preferred, implementation of this invention that has a moving LRF. If the
25 LRF moved, the two dimensions of scanning could be accomplished by the LRF and a
26 single mirror, rather than by two mirrors and a static LRF.

27 More importantly, Claim 14 does not refer to scanning. The embodiment
28 described in the specifications uses two mirrors and step motors to scan the plane. RLG

1 cites to prosecution history and deposition testimony in support of that position.
2 However, accepting that two mirrors are needed to accomplish the scanning in the
3 preferred embodiment does not mean that every claim must incorporate that requirement.
4 Here, Claim 14 relates to tracking and the specific phrase at issue is only a means for
5 projecting or reflecting, not scanning. Projecting and reflecting is the function identified
6 under the first prong and the Court will not read in additional limitations from the
7 specification that are not in the claim language. A single mirror can project or reflect the
8 light pulses and that is the only function claimed.

9 The uses of the terms projecting and reflecting in the other claims and in the
10 specification comports with the interpretation that a mirror, and not two mirrors with step
11 motors, is the way that a “means for projecting . . . and for reflecting” was used. Reading
12 the terms consistently throughout the patent, that is also how they would be understood
13 by a person of ordinary skill in the art. For example, if “projecting” always included the
14 idea of scanning in two dimensions using step motors, as RLG argues, then it would be
15 redundant for Claims 1 and 21 to explain that the projecting of light in those claims is “in
16 angular coordinates.”

17 In Claim 18, the language describes “a first mirror for continuously projecting
18 laser light pulses outwardly in horizontal planar angular coordinates onto an aircraft and a
19 second mirror for continuously projecting laser light pulses outwardly in vertical planar
20 angular coordinates.” This use explicitly shows that a single mirror can “project” in the
21 way that term is used in the patent. Each individual mirror is described as continuously
22 projecting pulses outwardly.

23 The use of the terms projecting and reflecting in the specification also supports the
24 conclusion that a single mirror is sufficient. The specification provides:

25 In a preferred embodiment of this invention, the capture
26 module is employed to direct the devices for projecting light
27 pulses to scan the area in front of a docking gate. Thus, when
28 mirrors are employed to reflect and project pulses such as
laser pulses, the capture module continues to direct the laser
to scan this area until it detects an object entering the area.

1 Here, the patent refers to “devices for projecting” in one sentence and then explains in the
2 next that “mirrors are employed to reflect and project pulses.” The devices for projecting
3 are the mirrors. A device for projecting and reflecting is a mirror. In Claim 14, a means
4 for projecting and reflecting is also a mirror.

5 This interpretation does not exclude the preferred embodiment as argued by RLG.
6 The claim as interpreted calls for a “mirror for projecting . . . and reflecting.” The
7 preferred embodiment does use a mirror. The words of the claim do not limit the use to
8 one mirror. RLG points to *Superior Fireplace Co. v. Majestic Products Co.*, 270 F.3d
9 1358, 1374 (Fed. Cir. 2001), in which the court focused on whether the plural “rear
10 walls” or the singular “rear wall” was applicable. However, the discussion about singular
11 versus plural language in *Majestic* came from the actual words of the claim itself, and
12 here the claim is not so specific. It is a means-plus-function claim “and such claim[s]
13 shall be construed to cover the corresponding structure, material, or acts described in the
14 specification and equivalents thereof.” 35 U.S.C. § 112.

15 Further, Claim 14 uses the transitional word “comprising,” which is “well
16 understood in patent law to mean ‘including but not limited to.’” *Exergen Corp. v. Wal-*
17 *Mart Stores, Inc.*, 575 F.3d 1312, 1319 (Fed. Cir. 2009) (quoting *CIAS, Inc. v. Alliance*
18 *Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007)). When a patent uses the term
19 “comprising,” the claim “is open-ended and allows for additional steps.” *Invitrogen Corp.*
20 *v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368 (Fed. Cir. 2003). This contrasts with patent
21 claims that use the phrase “consisting of” which is understood to be “closed-ended and
22 conveys limitation and exclusion.” *CIAS*, 327 F.3d at 1361. Here, the use of comprising
23 means that even if a second mirror were absolutely needed to perform the tracking
24 described in Claim 14, that is the kind of additional step that need not be included or
25 claimed because the claim does not purport to be limited to only the enumerated steps.

26 RLG also argues that a single mirror system would not be a unique invention, but
27 each step of the claim need not be unique. Indeed RLG agrees that the first and third parts
28 of Claim 14 should be interpreted as referring to an LRF, which RLG emphasizes is a

1 preexisting invention.

2 In its briefing, Safegate suggests that the interpretation for a “means for
3 projecting” could also be “at least one mirror.” RLG argues that this comes too late
4 because it was not proposed in the joint claim construction statement. As noted above, the
5 interpretation that a mirror is the means for projecting does not preclude the two mirror
6 system described in the specifications. In the phrase “means for projecting . . . and for
7 reflecting,” the Court interprets the “means” to be “a mirror,” and equivalents.

8 **2. Means for Detecting**

9 Safegate argues that “means for detecting” should be construed as “Programmed
10 CPU, programmed generally as in Figure 8, and equivalents under 112 P. 6.” RLG argues
11 that it should be construed as “Blocks of Figure 8, based upon angular step of 0.1 degree
12 interval for horizontal (α) and vertical (β) scanning, using Profile Table I to create a
13 Comparison Table for the detecting task.” This is again a means-plus-function claim and
14 the parties agree that the function is “[for detecting] the position relative to an imaginary
15 axial line projected from a predetermined point and for detecting the distance between
16 said object and said predetermined point.” (Doc. 67 at 4.)

17 Here, the phrase “means for detecting” might, in isolation and as a matter of the
18 natural scope of the meaning of those terms, refer to the entire process of using the LRF
19 to collect data and then processing that data to determine the position of the plane.
20 However, the collecting of data by generating, projecting, reflecting, and capturing, light
21 pulses has already been completed by the previous steps in Claim 14. The only
22 “detecting” function left to do is to process that gathered information to identify the
23 position of the plane and calculate its distance from the stopping point and the plane’s
24 relative offset to the left or right of where it should be.

25 Figure 8 illustrates the tracking phase of the system which is one of three phases in
26 the docking mode as described in the specification from Column 8 Line 65 through
27 Column 11 Line 30. Safegate’s proposed construction correctly identifies that a
28 programmed CPU is needed to run the steps and calculations described in Figure 8 and

1 the accompanying text. It also correctly states that the interpretation of the means-plus-
2 function claim should cover equivalents.

3 RLG agrees that Figure 8 contains the correct steps but further argues that the
4 construction must include horizontal and vertical scanning at 0.1 degree intervals.
5 However, the claim terms are not specific enough to justify reading in that exact angular
6 interval. As noted above, the “detecting” here refers only to the logic and calculation used
7 by the programmed CPU and not to the actual use of the LRF which occurred in previous
8 steps. Further, the 0.1 degree unit of measurement is repeatedly referred to in the
9 specification as the “approximate” or “preferred” angular step, and not as the required
10 one. There is no reason to read in this extra limitation from the specification into the
11 detecting function at issue here. A person of ordinary skill in the art would read the 0.1
12 degree intervals as a suggested and preferred unit, and not as a requirement that is
13 essential or limiting on the claims.

14 The next issue with the interpretation is whether the tables should be included in
15 the construction of the term “means for detecting” as RLG argues with its proposed
16 interpretation. In Claim 14, at the end of the “means for detecting” paragraph, after a
17 semicolon, is the word “wherein.” Three more paragraphs follow, specifying that a
18 comparison table, a distance distribution table, and an average distance are all created.
19 The question is whether that “wherein” means that those three things must be a part of
20 just the “means for detecting” or whether they refer more broadly to the entire Claim 14.

21 Here, the term “wherein” incorporates three additional requirements into the
22 “means for detecting” and not the whole of Claim 14. As noted above, the first three steps
23 in Claim 14 refer to the physical acts of generating the light pulses, projecting them out,
24 and then collecting them. These are not the computational steps of the process. The
25 “means for detecting” is where the programmed CPU interprets those measurements,
26 which it does by using the tables and calculating the distance. However, the existing
27 language of the claim already creates this link and states that these tables are used as part
28 of the “means for detecting” and there is no need to repeat that information in the

1 construction of “means for detecting.” RLG’s proposed language “using Profile Table I
2 to create a Comparison Table for the detecting task” would be redundant.

3 Accordingly, the construction of “means for detecting” is “a CPU programmed to
4 follow the logical steps outlined in Figure 8, or their equivalents, in order to determine.”
5 Safegate proposes a new and different interpretation in its Proposed Order that was not
6 briefed or argued. Regardless, the proposed language is rejected because it would be
7 repetitive of language that is already contained in the rest of the claim after the “means of
8 detecting.”

9 RLG argues that Safegate’s proposed construction is merely an abstract idea that
10 would not be patentable or is not enabled. As noted the language of the claim already
11 incorporates the tables that RLG wanted to add to the interpretation. The only other
12 details RLG proposes are the exact angles and the variables used in the preferred
13 embodiment. At the *Markman* hearing and in its proposed order, RLG suggests that the
14 Court could interpret the claim to mean any range between 0.01 and 1 degree. The Court
15 declines to adopt this arbitrary range that is not found in or implied by any of the intrinsic
16 or extrinsic evidence. The claim as interpreted is sufficiently specific that it is enabled
17 and not abstract, without impermissibly narrowing the means-plus-function claim to a
18 precise replica of the embodiment described in the specification as RLG proposes.

19 **3. Comparison, Profile, and Distance Distribution Tables**

20 Safegate argues that the three tables referenced in Claim 14 should all be
21 construed to mean “data.” RLG proposes more specific interpretations for each. RLG
22 argues that “a comparison table” should be construed as “Table II of 665 Patent, the basis
23 for the stored values is based upon an angular step of 0.1.” RLG argues that “a profile
24 table” should be construed as “Table I of 665 Patent, the basis for the stored values is
25 based upon an angular step of 0.1.” Finally, RLG argues that “a distance distribution
26 table” should be construed as “a derivative data collection structure as defined.”

27 First, one of the repeated goals of all of RLG’s proposed constructions here and in
28 other claims is the attempt to incorporate a requirement or limitation that the angular step

1 used must be 0.1 degrees, or at most between 0.01 and 1 degrees. For the reasons
2 described in the previous section, reading in this specific detail from the preferred
3 embodiment, or creating an arbitrary range around it, is not warranted or supported by the
4 language of the claims or the specification.

5 The same logic prevents this Court from reading in a requirement that the profile
6 and comparison tables must be the exact Tables I and II from the specification. Those
7 tables are incomplete examples with ellipsis to indicate missing columns and rows and
8 the columns and rows that are provided have XX's for most of their data. They are
9 described in the specification as preferred embodiments and not as required
10 configurations or layouts. These various tables are sometimes referred to as a database,
11 and the specification even suggests an additional value that could be stored in the
12 database, but explains that storing that data would limit the flexibility of the system.
13 (Column 7, Rows 41–55.) This would suggest to a person of ordinary skill in the art that
14 the precise composition of these tables is not limited to the preferred embodiment.

15 RLG argues that data from an LRF is not patentable and would be excluded by
16 previous patents. While RLG makes various cursory arguments about how individual
17 phrases of each claim might be anticipated or otherwise not patentable if they are
18 interpreted as Safegate proposes, RLG has not made a sufficiently thorough argument
19 about how an entire claim is unpatentable for this Court to consider. Furthermore, RLG
20 admitted at the *Markman* hearing that it was not pursuing any invalidity arguments in this
21 case. RLG also argues that in reference to these tables, Safegate has invented a kind of
22 data structure, but using a table to store data is not a unique or original concept in and of
23 itself.

24 On the other hand, simply interpreting the three kinds of tables as “data” might
25 broaden the scope of the claims. Even without looking to the specification, the terms
26 “comparison table,” “profile table,” and “distance distribution table” imply a more
27 specific meaning than just “data.” If they all generically meant “data” and nothing more
28 specific than that, then there would be no purpose in identifying and referring to them

1 separately. The three terms do all use the word “table” which is used in the specification
2 to refer to data, or some organized collection of data that is stored in rows and columns.
3 However, there is no need to read in that level of detail from the specification. The word
4 “table” does mean data, but the remaining words in the disputed terms are necessary to
5 preserve the more specific meaning as to which kind of data is being discussed in each
6 instance. Therefore, the disputed terms are interpreted as follows: “a comparison table”
7 is “comparison data;” “a profile table” is “profile data;” and “a distance distribution
8 table” is “distance distribution data.”

9 **B. Claim 1 of the ‘489 Patent.**

10 **1. Projecting Means**

11 Safegate argues that “projecting means” should be construed as “mirror” and RLG
12 argues that it should be construed as “using 2 mirrors (one for horizontal scan, one for
13 vertical scan), each mirror separately controlled by a step motor.” This is a means-plus-
14 function and the parties agree that the function is “for projecting said pulses outwardly
15 onto the detected object.” (Doc. 67 at 4.)

16 The patent application that led to the ‘489 patent is a continuation-in-part of the
17 application that led to the ‘665 patent. Neither party has argued that the terms “projecting
18 means” in ‘489 should be interpreted differently than “means for projecting” in ‘665. In
19 fact, both parties propose the same interpretation here that they proposed in the other
20 patent. For the reasons described above, the construction of “projecting means” is “a
21 mirror,” and equivalents.

22 **2. Comparing Means and Identifying Means**

23 The parties present arguments about the construction of the “comparing means”
24 and “identifying means” in Claim 1 of the ‘489 patent that are similar to the arguments
25 they presented for the “means for detecting” in the ‘665 patent.

26 Safegate argues that they should be construed as a CPU programmed generally as
27 shown in the corresponding figures from the specification, while RLG argues that they
28 should be construed to include the specific tables and angular steps from the

1 specification. Specifically, Safegate argues that “comparing means” should be construed
2 as “Programmed CPU, programmed generally as in Figure 10.” RLG argues that it should
3 be construed as “using Profile Table and Comparison Table to check for the matched
4 values echoed back from the projecting means, the data collection and storage is based
5 upon angular step of 0.1 degree.” Safegate argues that “identifying means” should be
6 construed as “Programmed CPU programmed generally as in Figure 11.” RLG argues
7 that it should be construed as “Calculating the threshold value of echoes from the two
8 volumes V_i and V_o , using the formula of $V_i/(V_i+V_o)$, to determine whether a feature
9 (such as engine) is in its expected location.”

10 In both cases, the parties agree that these are means-plus-function claims and the
11 parties agree on the function. The function of the “comparing means” is “for comparing
12 the detected shape with a profile corresponding to the known shape and for determining
13 whether the detected shape corresponds to the known shape.” (Doc. 67 at 4.) The
14 function of the “identifying means” is “for identifying whether the detected object is the
15 known object by determining whether the detected object has the known feature at the
16 known location.” (Doc. 67 at 4.)

17 As was true of the disputed terms in Claim 14 of the ‘665 patent, the projecting
18 and collecting of the signals and data from the LRF has already been accomplished in the
19 previous steps of Claim 1 of the ‘489 patent. Therefore, the comparing and identifying
20 means are again entirely an analysis of the data already collected. Safegate is correct that
21 this would require a CPU programmed to follow the steps described in the specification,
22 or their equivalents.

23 RLG again asks the Court to import exact characteristics from the specification as
24 limitations on the claim. As described above, the 0.1 degree angles are not mandatory
25 limitations on the claims but are instead a specific part of the preferred embodiment.
26 Similarly there is no reason to import the exact formula or the variables used to determine
27 whether an engine or other plane part is in the expected location. There is also no reason
28 to read in the use of specific tables, such as the Profile Table and Comparison Table, into

1 the disputed terms here.

2 The term “comparing means” is construed as “a CPU, programmed generally as in
3 Figure 10,” and equivalents. The term “identifying means” is construed as “a CPU,
4 programmed generally as in Figure 11,” and equivalents. Safegate proposes a different
5 three-step algorithm for the meaning of these terms. These arguments are raised for the
6 first time in the proposed order and will not be adopted.

7 **C. Claim 11 of the ‘489 Patent.**

8 The final three disputes are over Claim 11 which is a method claim because it is
9 described as a “method for determining.” Safegate does not feel construction is needed
10 for any of the terms raised by RLG.

11 RLG argues that the phrases it disputes should be interpreted as steps that are
12 accomplished by the means described in Claim 1. Although it is not entirely clear from
13 the briefing, it appears that RLG is making an argument that Claim 11 is a step-plus-
14 function claim that should be limited to the exact means described in Claim 1. However,

15 [t]he mere fact that a method claim is drafted with language
16 parallel to an apparatus claim with means-plus-function
17 language does not mean that the method claim should be
18 subject to an analysis under § 112, paragraph 6. Rather, each
19 limitation of each claim must be independently reviewed to
determine if it is subject to the requirements of § 112,
paragraph 6.

20 *Generation II Orthotics Inc. v. Med. Tech. Inc.*, 263 F.3d 1356, 1368 (Fed. Cir. 2001)
21 (internal citations omitted). Here, the individual limitations of Claim 11 do not employ
22 the term step and do not in any other way explicitly reference Claim 1. If they were
23 interpreted to merely be a method of performing the functions already covered by Claim
24 1, there would be little independent meaning or value to Claim 11. Claims should
25 generally be construed to give independent meaning to each claim.

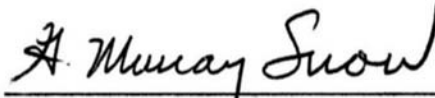
26 The Court sees no reason to offer further construction of the language of Claim 11
27 because the proposed constructions by RLG are unwarranted and the meaning of Claim
28 11 would be sufficiently clear without further construction.

1 **CONCLUSION**

2 For the foregoing reasons,

3 **IT IS HERBY ORDERED** that the claims are construed under *Markman v.*
4 *Westview Instruments, Inc.*, 517 U.S. 370 (1996) as specified above.

5 Dated this 11th day of July, 2014.

6 

7 _____
8 G. Murray Snow
9 United States District Judge

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