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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

INTRI-PLEX TECHNOLOGIES, INC.,

Plaintiff,

v.

NHK INTERNATIONAL CORPORATION,
et al.,

Defendants.

Case No. [17-cv-01097-EMC](#)

ORDER RE CLAIM CONSTRUCTION

Plaintiff Intri-Plex Technologies, Inc. (“IPT”) has sued multiple companies for infringement of its ‘841 patent. On January 29, 2018, the parties appeared before the Court for a claim construction hearing. The parties have asked the Court to construe only one term, which appears in claims 1, 4, 7, and 10 of the ‘841 patent.

I. ‘841 PATENT

The ‘841 patent is titled “Optimized Low Profile Swage Mount Base Plate Attachment of Suspension Assembly for Hard Disk Drive.” As reflected by the title, the patent relates to hard disk drives (“HDDs”). More specifically, the patent concerns a component – known as a “base plate” – of a larger structure that is ultimately used to help in the writing data to and reading data from the HDD surfaces.

The specification of the ‘841 patent reinforces that the invention at issue relates to HDDs. For example, in the section “Field of the Invention,” the specification states: “This invention relates to disk head assemblies for supporting read/write heads adjacent rotating disks in disk drives.” ‘841 patent, col. 1:18-20. Also, in the section “Description of the Prior Art,” the specification pinpoints that the prior art became inefficient when “the size of the disk drive . . . decreased to fit in small lap top computers.” ‘841 patent, col. 1:64-65; *see also* ‘841 patent, col.

1 1:62-2:10 (describing two problems that arose as disk drives became smaller – (1) maintaining a
2 strong connection between the base plate and actuator arm boss hole and (2) poor HDD
3 performance related to pre-load). And as yet another example, in the section “Summary of the
4 Invention,” the specification states that “the invention is concerned with an optimized low profile
5 base plate for attachment of a suspension assembly to an actuator arm in a hard disk drive.” ‘841
6 patent, col. 2:13-15. Finally, in the section “Detailed Description of the Invention,” the
7 specification explains that, “[i]n a fully assembled magnetic disk drive, an actuator arm and head
8 suspension, which are elements of an actuator arm assembly, are connected end to end by a base
9 plate.” ‘841 patent, col. 3:15-17.

10 As explained in the specification, the asserted novelty of the ‘841 patent is that it provides
11 an optimized design for the base plate used in HDDs – *i.e.*, the patent “achieve[s] both high post-
12 swage torque retention and reliable gram loading.” Op. Br. at 4; *see also* ‘841 patent, col. 2:27-30
13 (stating that “[t]he invention has the advantage that gram load change inherent in swaging is
14 reduced and a large retention torque can be created even in low hub height configurations that
15 offer limited retention torque in a standard hub geometry”). In particular, the optimized
16 parameters are such as to satisfy the following equation:

$$\frac{W_H}{T_{BP}} \cdot \frac{W_H}{(H_{IS} + H_H - H_{CB})/2} \geq 5$$

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20 ‘841 patent, col. 2:21-22.

21 Claim 1 of the ‘841 patent is a representative claim. It provides as follows:

22 1. An **optimized low profile base plate** for attachment
23 of a suspension assembly to an actuator arm in a hard disk drive
comprising:

24 a flange having a flange thickness (T_{BP}); and,

25 a hub having, a hub height (H_H), a hub radial width W_H , a
26 land height hub inner surface depth (H_{IS}), and a
lead in shoulder hub counter bore height (H_{CB});

27 wherein

$$\frac{W_H}{T_{BP}} \cdot \frac{W_H}{(H_{IS} + H_H - H_{cb})/2} \geq 5$$

‘841 patent, claim 1 (emphasis added).¹ The bolded language above is the claim language at issue. Although the language is found in the preamble of the claim, IPT contends that it is a limitation on the invention. Defendants argue to the contrary.

II. DISCUSSION

Claim construction is a question of law, although it may have factual underpinnings. *See Icon Health & Fitness, Inc. v. Polar Electro Oy*, 656 Fed. App’x 1008, 1013 (Fed. Cir. 2016); *see also Multilayer Stretch Cling Film Holdings, Inc. v. Berry Plastics Corp.*, 831 F.3d 1350, 1357 (Fed. Cir. 2016). It “serves to define the scope of the patented invention and the patentee’s right to exclude.” *HTC Corp. v. Cellular Communs. Equip., LLC*, 877 F.3d 1361, 1367 (Fed. Cir. 2017); *see also O2 Micro Int’l Ld. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) (stating that the purpose of claim construction is “to determin[e] the meaning and scope of the patent claims asserted to be infringed”) (internal quotation marks omitted).

Words of a claim are generally given their ordinary and customary meaning, which is the meaning a term would have to a person of ordinary skill in the art after reviewing the intrinsic record at the time of the invention. “In some cases, the ordinary meaning of claim language . . . may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” However, in many cases, the meaning of a claim term as understood by persons of skill in the art is not readily apparent.

Id.

Because the meaning of a claim term as understood by persons of skill in the art is often not immediately apparent, and because patentees frequently use terms idiosyncratically, the court looks 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.” Those sources include “the words of the claims themselves, the remainder of the specification, the prosecution history, and

¹ Some of the independent claims in the patent use a slightly different equation, one with additional parameters. *See* ‘841 patent, claims 4, 10.

1 extrinsic evidence concerning relevant scientific principles, the
2 meaning of technical terms, and the state of the art.”

3 *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005). Although extrinsic evidence “can
4 shed useful light on the relevant art, . . . it is less significant than the intrinsic record in
5 determining the legally operative meaning of claim language.” *Id.* at 1317 (internal quotation
6 marks omitted).

7 As noted above, in the instant case, the dispute between the parties concerns the phrase
8 “optimized low profile base plate.” According to IPT, although the phrase appears only in the
9 preamble of the patent claims, it is limiting in nature and therefore is subject to construction –
10 although the only construction offered by IPT is “plain and ordinary meaning.” In contrast,
11 Defendants contend that the preamble phrase “optimized low profile base plate” is not a limitation
12 on the invention and therefore is not subject to claim construction. In the alternative, Defendants
13 offer the following construction for the phrase:

14 A base plate having a profile with dimensions that satisfy:

$$\frac{W_H}{T_{BP}} \cdot \frac{W_H}{(H_{IS} + H_H - H_{cb})/2} \geq 5$$

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18 A. General Law on Preambles

19 “Whether a preamble stating the purpose and context of the invention constitutes a
20 limitation of the claimed process is determined on the facts of each case in light of the overall
21 form of the claim, and the invention as described in the specification and illuminated in the
22 prosecution history.” *Applied Mats., Inc. v. Adv. Semiconductor Mats. Am., Inc.*, 98 F.3d 1563,
23 1572-73 (Fed. Cir. 1996); *see also Catalina Mktg. Int'l v. Coolsavings.com, Inc.*, 289 F.3d 801,
24 808 (Fed. Cir. 2002) (stating that, when a court decides whether a preamble is a limitation, it must
25 consider “‘the entire[] . . . patent to gain an understanding of what the inventors actually invented
26 and intended to encompass by the claim’”).

27 In general, a preamble limits the invention if it recites essential
28 structure or steps, or if it is “necessary to give life, meaning, and
vitality” to the claim. Conversely, a preamble is not limiting “where

1 a patentee defines a structurally complete invention in the claim
2 body and uses the preamble only to state a purpose or intended use
3 for the invention.”

3 *Id.*

4 The Federal Circuit has stated that “[n]o litmus test defines when a preamble limits claim
5 scope” but acknowledges that “[s]ome guideposts . . . have emerged from various cases discussing
6 the preamble’s effect on claim scope.” *Id.* Examples include the following:

- 7 • “Jepson claiming² generally indicates intent to use the preamble to define the claimed
8 invention, thereby limiting claim scope.” *Id.*
- 9 • “[D]ependence on a particular disputed preamble phrase for antecedent basis may limit
10 claim scope because it indicates a reliance on both the preamble and claim body to
11 define the claimed invention.” *Id.*
- 12 • “[W]hen the preamble is essential to understand limitations or terms in the claim body,
13 the preamble limits claim scope.” *Id.*
- 14 • “[W]hen reciting additional structure or steps underscored as important by the
15 specification, the preamble may operate as a claim limitation.” *Id.*
- 16 • “[C]lear reliance on the preamble during prosecution to distinguish the claimed
17 invention from the prior art transforms the preamble into a claim limitation because
18 such reliance indicates use of the preamble to define, in part, the claimed invention.”
19 *Id.*
- 20 • “[A] preamble generally is not limiting when the claim body describes a structurally
21 complete invention such that deletion of the preamble phrase does not affect the

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24 A “Jepson” claim is one that contains (1) a preamble that recites an
25 old device, process, or combination, (2) a transition phrase such as
26 “wherein the improvement comprises,” and (3) a body which states
27 the new elements or improvements upon the old device, process, or
28 combination. The preamble in a Jepson claim constitutes “a
limitation for purposes of determining patentability and
infringement.”

28 *Xilinx, Inc. v. Altera Corp.*, No. 93-20409 SW, CIVIL NO. 96-20922 SW, 1998 U.S. Dist. LEXIS
14774, at *6-7 (N.D. Cal. July 30, 1998).

- 1 structure or steps of the claimed invention.” *Id.* at 809.
- 2 • “[P]reamble language merely extolling benefits or features of the claimed invention
- 3 does not limit the claim scope without clear reliance on those benefits or features as
- 4 patentably significant.” *Id.*
- 5 • “[P]reambles describing the use of an invention generally do not limit the claims
- 6 because the patentability of apparatus or composition claims depends on the claimed
- 7 structure, not on the use or purpose of that structure.” *Id.* “[S]tatements of intended
- 8 use or asserted benefits in the preamble may, in rare instances, limit apparatus claims,
- 9 but only if the applicant clearly and unmistakably relied on those uses or benefits to
- 10 distinguish prior art.” *Id.*

11 B. “Base Plate”

12 Although the entire phrase “optimized low profile base plate” is at issue, both parties

13 consider each term of the phrase separately. The Court adopts this approach and addresses first

14 the term “base plate.”

15 According to Defendants, “base plate” is not limiting in nature because it is simply a label

16 for or description of the structurally complete invention set forth in the body of the claim – *i.e.*, a

17 flange and hub with certain dimensions. Although Defendants do not cite *IMS Technology, Inc. v.*

18 *Haas Automation, Inc.*, 206 F.3d 1422 (Fed. Cir. 2000), in their papers, the case is one example of

19 a situation where the Federal Circuit found a preamble not limiting on that basis.

20 In *IMS*, the plaintiff was a manufacturer of machine tools and machine tool controls. *See*

21 *id.* at 1425. The patent owned by the plaintiff related “generally to a control for a machine tool,

22 such as a milling machine, which is used to cut or remove material from an object, referred to as a

23 workpiece, through a machining operation.” *Id.* at 1426. The preamble of claim 1 of the patent

24 read: “1. A programmable microcomputer control apparatus for controlling the relative motion

25 between a tool and a workpiece comprising” *Id.* at 1427. The district court construed the

26 preamble as limiting – *i.e.*, “to a ‘control system for machine tools rather than an entire machine

27 tool apparatus.’ To the extent that the district court’s claim interpretation preclude[d] a finding of

28 infringement by a machine tool apparatus that include[d] the claimed control-related limitations,”

1 the Federal Circuit found that the district court had erred. *Id.* The circuit court explained:

2 The phrase “control apparatus” in the preamble *merely gives a*
3 *descriptive name to the set of limitations in the body of the claim*
4 *that completely set forth the invention.* Its use does not limit the
5 claims . . . to a control apparatus that is separate from the machine
6 tool. The claim is infringed by any apparatus encompassing all of
7 the limitations in the body of the claim. Such an infringing
8 apparatus may be a machine tool apparatus that includes the claimed
9 control features or a control apparatus that is separate from and
10 communicates with a machine tool apparatus.

11 *Id.* (emphasis added); *see also Am. Med. Sys., Inc. v. Biolitec, Inc.*, 618 F.3d 1354, 1370 (Fed. Cir.
12 2010) (holding that the term “photosensitive vaporization” as used in the preamble was simply “a
13 *label for the overall invention* and not a limitation on the claims”) (emphasis added); *Schmalz, Inc.*
14 *v. Better Vacuum Cups, Inc.*, No. 16-10040, 2017 U.S. Dist. LEXIS 144280, at *9 (E.D. Mich.
15 Sep. 6, 2017) (stating that the term in the preamble was simply “a name for the structurally
16 complete invention”); *cf. Am. Med.*, 618 F.3d at 1359 (stating that, “[i]f the preamble ‘is
17 reasonably susceptible to being construed to be merely duplicative of the limitations in the body of
18 the claim (and was not clearly added to overcome a [prior art] rejection), we do not construe it to
19 be a separate limitation”).

20 IPT protests that its invention does not cover *any* kind of structure made up of a flange and
21 hub (with certain dimensions); rather, its invention concerns a component of a HDD specifically.
22 *See Op. Br.* at 7 (stating that the “invention is directed to a particular HDD component”).

23 The Court agrees with IPT. As an initial matter, the Court notes that, at the hearing,
24 Defendants expressly conceded that the invention at issue relates to the HDD context specifically.
25 Moreover, as IPT argues, the situation here is ultimately similar to that in *Deere & Co. v. Bush*
26 *Hog, LLC*, 703 F.3d 1349 (Fed. Cir. 2012), where the court found the preamble limiting in nature.

27 In *Deere*, the patent at issue disclosed “an ‘easy clean dual wall deck’ for a rotary cutter.”
28 *Id.* at 1352. “[R]otary cutters . . . are pulled behind a tractor and [are] used to mow wide swaths of
ground.” *Id.* The specification explained that, during use of a rotary cutter, debris accumulates on
the top of the cutter deck and, if not cleaned off, the debris retains moisture which leads to the
deck rusting out. The prior art rotary cutters had structural components that made it difficult to
clean the deck (if mounted on top of the cutter deck) or that interfered with efficiency (if mounted

1 underneath the deck). The patent at issue addressed these prior art problems by disclosing “a dual-
2 wall deck that encloses the structural components in a torsionally-strong box.” *Id.* Claim 1 of the
3 patent recited “[a] rotary cutter deck comprising,” *inter alia*, a lower deck wall, an upper deck
4 wall, front and rear portions, and right- and left-hand end wall structures to define a box section
5 having torsional stiffness. *Id.* at 1353.

6 The trial court found that the preamble term “rotary cutter deck” was limiting in nature and
7 defined it as “the blade housing on a power mower.”³ *Id.* at 1357. The Federal Circuit agreed
8 with the trial court that the term was limiting even though in the preamble. It noted first that

9 [t]he recitation of a “rotary cutter deck” in Claim 1 is necessary to
10 understand the subject matter encompassed by the claim, which
11 otherwise generally recites deck walls that “define a box section
12 having torsional stiffness.” Unlike non-limiting preamble terms,
13 “rotary cutter deck” does not merely state a name or a use for the
14 claimed box section. Rather, the term describes a “fundamental
15 characteristic of the claimed invention” that informs one of skill in
16 the art as to the structure required by the claim. For example, that
17 the claim is drawn to a “rotary cutter deck” informs the meaning of
18 the “torsional stiffness” limitation – the claimed structure must
19 possess sufficient stiffness to withstand the torsional loads imposed
20 by the operation of a rotary cutter.

21 *Id.* at 1358.

22 The Federal Circuit went on to emphasize that the specification established the phrase
23 “rotary cutter deck” as a limitation.

24 The specification repeatedly refers to the “present invention” as “an
25 improved deck for a rotary cutter,” or a “rotary cutter deck.” The
26 title of the patent, the summary of the invention, and every drawing
27 describe the invention as a deck for a rotary cutter. The
28 specification explains that the invention addresses a concern specific
to rotary cutter: the need for a cutter deck that is smooth and easy to
clean, but does not reduce cutting efficiency. In sum, the
specification underscores the importance of “rotary cutter deck” as a
limitation of the claimed invention.

Id.

As IPT asserts, *Deere* is analogous to the instant case. First, that the term “base plate” is
limiting in nature is suggested by the fact that it informs the meaning of the equation in the body

³ The term “rotary cutter deck” appeared only in the preamble of the claims, although it provided
an antecedent basis for “said deck” in one claim. *See Deere*, 703 F.3d at 1357.

1 of the claim. The optimized design reflected in the equation takes into account that the base plate
2 is being used in a HDD specifically – *i.e.*, the design takes into account the issues of torque
3 retention capability and pre-load changes.

4 Second, the title of the patent uses the term “base plate” (specifically, in the hard disk drive
5 context) as does the summary of the invention. *See* ‘841 patent, col. 2:13-15 (summary of the
6 invention) (“Briefly the invention is concerned with an optimized low profile base plate for the
7 attachment of a suspension assembly to an actuator arm in a hard disk drive.”). In addition, the
8 background of the invention describes the invention as a “base plate” in the hard disk drive
9 context. *See* ‘841 patent, col. 1:18-22 (“This invention relates to disk head assemblies for
10 supporting read/write heads adjacent rotating disks in disk drives and more particularly, to a low
11 profile base plate for attaching a head suspension assembly to a head actuator arm.”). Finally, the
12 specification explains that the invention addresses a concern specific to a base plate used in a hard
13 disk drive. *See* ‘841 patent, col. 1:62-65 (“Problems with this method of mounting transducer
14 heads have arisen as the need for increased data storage capacity in hard disk drives has grown and
15 the size of the disk drive has decreased to fit in small lap top computers.”).

16 Accordingly, contrary to what Defendants contend, “base plate” is not simply a “a name
17 for the structurally complete invention.” *Schmalz*, 2017 U.S. Dist. LEXIS 144280, at *9. The
18 term is not “merely duplicative of the limitations in the body of the claim.” *Am. Med.*, 618 F.3d at
19 1359. Instead, it is essential in giving meaning and context to the body of the claim, consistent
20 with the title, summary, and specification of the patent.

21 The Court therefore agrees with IPT that “base plate” is a limiting term even if in the
22 preamble only. The only remaining question is whether “base plate” should be further defined.
23 IPT argues “no,” asserting that the Court may rest on the term’s plain and ordinary meaning. And
24 practically speaking, Defendants do not disagree as their proposed definition of the larger phrase
25 “optimized low profile base plate” repeats the term “base plate.” The Court, therefore, need not, at
26 this juncture, provide any specific construction for the term “base plate.”

27 C. “Optimized”

28 The second term at issue is “optimized.” Here, the Court does not agree with IPT’s

1 position that “optimized” as used in the preamble is a limiting term. As Defendants point out, that
2 argument is contrary to Federal Circuit authority holding that “a preamble generally is not limiting
3 when the claim body describes a structurally complete invention such that deletion of the preamble
4 phrase does not affect the structure or steps of the claimed invention.” *Catalina Mktg.*, 289 F.3d at
5 809. “Optimization” is what the equation in the body of claim 1 provides (*i.e.*, an optimized
6 design). Thus, the use of the term “optimized” in the preamble is essentially duplicative of the
7 equation in the body of claim 1 (or the relevant equation in the other claims). *See* ‘841 patent, col.
8 2:21-22 (“The optimized parameters are such as to satisfy the following equation:”); *see also*
9 *Am. Med.*, 618 F.3d at 1359 (stating that, “[i]f the preamble ‘is reasonably susceptible to being
10 construed to be merely duplicative of the limitations in the body of the claim (and was not clearly
11 added to overcome a [prior art] rejection), we do not construe it to be a separate limitation”).

12 D. “Low Profile”

13 The parties’ main dispute turns on the term “low profile” – *i.e.*, whether this preamble term
14 is limiting in nature. IPT argues that “low profile” must be deemed limiting because “the ‘841
15 Patent discloses exemplary base plate dimensions that have a geometry metric value above 5” but,
16 “because the geometry metric value is the result of a ratio, an object with those dimensions *in*
17 *kilometers* (or miles) would result in the same geometry metric value.” Op. Br. at 7-8 (emphasis
18 in original). “To read the ‘841 Patent as covering such objects would be ‘divorced from reality’ –
19 especially since the invention is directed at base plates used in hard disk drives. Op. Br. at 8. In
20 short, according to IPT, “low profile” is a necessary term that provides the scale of the
21 optimization formula.

22 The Court finds that “low profile” is, indeed, limiting based on Federal Circuit authority
23 holding that, “when reciting additional structure or steps underscored as important by the
24 specification, the preamble may operate as a claim limitation.” *Catalina Mktg.*, 289 F.3d at 808.
25 *Poly-America, L.P. v. GSE Lining Technology, Inc.*, 383 F.3d 1303 (Fed. Cir. 2004), is a good
26 example of such a case. There, the Federal Circuit agreed with the patent holder that “the
27 [preamble] phrase ‘blown-film’ is a limitation” because “[t]he specification is replete with
28 references to the invention as a ‘blown-film’ liner, including the title of the patent itself and the

1 ‘Summary of the Invention.’” *Id.* at 1310. The court also noted that “[t]he phrase is used
2 repeatedly to described the preferred embodiments, and the entire preamble ‘blown-film textured
3 liner’ is restated in each of the patent’s seven claims.” *Id.*

4 *General Electric Co. v. Nintendo Co.*, 179 F.3d 1350 (Fed. Cir. 1999), is another example.
5 There, the patent at issue was directed to devices for retrieving stored picture information from the
6 memory of a computer and displaying that information on a standard television screen or other
7 display device (*e.g.*, monitor). *See id.* at 1352. The alleged infringer argued that there was no
8 infringement because claim 1 requires a bit map display device and the accused products did not
9 meet this limitation. The question for the Federal Circuit was whether a bit map display device
10 was a limitation on claim 1; the only reference in claim 1 to a bit map display was in the preamble
11 – *i.e.*, “[a] system for displaying a pattern on a raster scanned display device by mapping bits
12 from a display location in a memory associated with a computer onto the raster.” *Id.* at 1361.
13 The court found that the preamble was a limitation.

14 Here, the ‘125 specification makes clear that the inventors were
15 working on the particular problem of displaying binary data on a
16 raster scan display device and not general improvements to ally
17 display systems. In light of the specification, to read the claim
18 indiscriminately to cover all types of display systems would be
19 divorced from reality. The invention so described is restricted to
20 those display devices that work by displaying bits, which is not true
with respect to all display systems recited in just the body of the
claim. “Thus, we conclude that the claim preamble in this instance
does not merely state a purpose or intended use for the claimed
structure. Rather, those words do give ‘life and meaning’ and
provide further positive limitations to the invention claims.”

21 *Id.* at 1361-62; *see also Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251,
22 1256-57 (Fed. Cir. 1989) (rejecting alleged infringer’s argument that that preamble term “optical
23 waveguide” was not a limitation and simply stated an intended use; “[t]o read the claim in light of
24 the specification indiscriminately to cover all types of optical fibers would be divorced from
25 reality”).

26 In the instant case, the specification indicates that the preamble phrase “low profile” should
27 be considered a limitation. Similar to the situation in *Poly-America*, here, the preamble phrase
28 “low profile” is part of the title of the patent itself (“Optimized Low Profile Swage Mount Base

1 Plate Attachment of Suspension Assembly for Hard Disk Drive”) and the summary of the
2 invention. *See* ‘841 patent, col. 2:14-16 (summary of the invention) (“Briefly, the invention is
3 concerned with an optimized *low profile* base plate for attachment of a suspension assembly to an
4 actuator arm in a hard disk drive.”) (emphasis added); ‘841 patent, col. 2:27-30 (summary of the
5 invention) (“The invention has the advantage that gram load change inherent in swaging is
6 reduced and a large retention torque can be created even in *low hub height configurations* that
7 offer limited retention torque in a standard hub geometry.”) (emphasis added). Also, the preamble
8 phrase “low profile” is restated in each of the patent’s independent claims. *See* ‘841 patent, claims
9 1, 4, 7, 10. Finally, the background of the invention emphasizes that the invention is a low profile
10 base plate specifically. *See* ‘841 patent, col. 1:18-22 (“This invention relates to disk head
11 assemblies for supporting read/write heads adjacent rotating disks in disk drives and more
12 particularly, to a *low profile* base plate for attaching a head suspension assembly to a head actuator
13 arm.”) (emphasis added); ‘841 patent, col. 2:7-8 (“It is therefore desirable to provide a base plate
14 that has a *lower profile* than a conventional base plate”) (emphasis added). This is
15 underscored by the prosecution history. *See* Op. Br., Ex. B (affidavit submitted to the PTO on
16 behalf of IPT) (stating that “there was a long felt need for the invention as evidenced by customers
17 requiring a *low profile* base plate that has a *lower profile* than a conventional base plate, a torque
18 retention capability comparable to existing products with a reduced pre-load change caused by the
19 swaging process, needs that are well known in the industry wherein disk drives are becoming
20 smaller and faster”) (emphasis added). And it is clear from the title, summary, and specification
21 that the scale of the invention is such that it applies to HDDs.

22 The arguments that Defendants make in their responsive brief are not persuasive. For
23 example, as noted above, in its opening brief, IPT argued that “low profile” must be deemed a
24 limitation even though appearing in the preamble only because otherwise “an object with [certain]
25 dimensions *in kilometers* (or miles)” would satisfy the equation in, *e.g.*, claim 1. Op. Br. at 8
26 (emphasis in original). In response to IPT’s argument, Defendants argued that this was an
27 “insincere” concern because “base plates are components of a hard disk drive and none of the
28 accused or prior art base plates at issue in this case is so impractically sized in kilometers.” Resp.

1 Br. at 7. But if anything, this argument of Defendants underscores why “low profile” is in fact
2 part of the invention claimed: the body of claim 1 does not refer to HDDs; “low profile” is not
3 duplicative of anything in the body of the claim.

4 Defendants protest that if the term “low profile” is a limitation on the invention, then the
5 invention must be deemed invalid because “low profile” is indefinite. Defendants have the burden
6 of establishing indefiniteness by clear and convincing evidence. *See TecSec v. Int’l Bus Machines*
7 *Corp.*, 731 F.3d 1336, 1349 (Fed. Cir. 2013). Generally, “a patent is invalid for indefiniteness if
8 its claims, read in light of the specification delineating the patent, and the prosecution history, fail
9 to inform, with reasonable certainty, those skilled in the art about the scope of the invention.”
10 *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014); *see also Takeda Pharm.*
11 *Co. v. Mylan Inc.*, No. 13-CV-04001-LHK, 2014 U.S. Dist. LEXIS 159527, at *13-14 (N.D. Cal.
12 Nov. 11, 2014) (noting that, prior to *Nautilus*, “the Federal Circuit applied an ‘insolubly
13 ambiguous’ standard to indefiniteness questions” but “the Supreme Court rejected the insolubly
14 ambiguous standard and replaced it with a ‘reasonable certainty’ standard”).

15 Whether a claim is indefinite or definite is a question of law. *See DDR Holdings, LLC v.*
16 *Hotels.com, L.P.*, 773 F.3d 1245, 1260 (Fed. Cir. 2014). But while “[i]ndefiniteness is . . . a legal
17 determination arising out of the court’s performance of its duty construing the claims,” “[I]ike
18 enablement, definiteness, too, is amenable to resolution by the jury where the issues are factual in
19 nature.” *BJ Servs. Co. v. Halliburton Energy Servs.*, 338 F.3d 1368, 1372 (Fed. Cir. 2003).

20 Defendants argue that “low profile” is indefinite because it “is a relative term with no
21 understood meaning.” Resp. Br. at 5. In response, IPT notes that “relative terms and words of
22 degree do not render patent claims invalid” so long as the claim terms inform those skilled in the
23 art about the scope of the invention with reasonable certainty. *One-E-Way, Inc. v. Int’l Trade*
24 *Comm’n*, 859 F.3d 1059, 1063 (Fed. Cir. 2017) (adding that “[o]ne must bear in mind . . . that
25 patents are not addressed to lawyers, or even to the public generally, but rather to those skilled in
26 the relevant art”) (internal quotation marks omitted).

27 For example, in 1923, the Supreme Court “up[eld] as definite a
28 patent for an improvement to a paper-making machine, which
provided that a wire be placed at a ‘high’ or ‘substantial elevation.’”

1 *Nautilus*, 134 S. Ct. at 2129 n.5 (citing *Eibel Process*, 261 U.S. at
2 58). The Court explained that these relative terms – “substantial”
3 and “high” – were sufficiently definite because “‘readers . . . skilled
4 in the art of paper making and versed in the use of the . . . machine’
5 would have ‘no difficulty . . . in determining . . . the substantial
6 [elevation] needed’ for the machine to operate as specified.” *Id.*
7 (quoting *Eibel Process*, 261 U.S. at 65-66).

8 *Id.*

9 In *One-E-Way*, the Federal Circuit noted that

10 [t]his historical practice continues today. In one of our post-
11 *Nautilus* decisions, we upheld as definite a claim that employed the
12 relative term “substantially centered.” *Apple Inc. v. Samsung Elecs.*
13 *Co.*, 786 F.3d 983, 1002 (Fed. Cir. 2015), *rev’d and remanded on*
14 *other grounds*, 137 S. Ct. 429, 196 L. Ed. 2d 363 (2016). The claim
15 term, used in a patent relating to a user-interface feature, required
16 that a selected portion of an electronic display be enlarged and
17 “substantially centered” on the display. *Id.* (quoting U.S. Patent No.
18 7,864,163 (Claim 50)). The patent challenger had failed to adduce
19 any evidence showing that the person of ordinary skill would lack
20 reasonable certainty in the claim's scope, while the patent owner had
21 presented expert testimony that skilled artisans would interpret
22 “substantially centered” in the patent “to mean essentially centered
23 except for a marginal spacing to accommodate ancillary graphical
24 user interface elements.” *Id.* at 1003. Moreover, the expert’s
25 suggested interpretation of “substantially centered” paralleled the
26 patent specification's disclosure. *Id.* Relying on these disclosures,
27 the court concluded that “substantially centered” was not indefinite.
28 *Id.*

1 *Id.*

2 And in *One-E-Way* itself, the Federal Circuit held that the term “virtually free from
3 interference” was not indefinite and that the term meant preventing one user from eavesdropping
4 on another. *See id.* at 1063-64. The court noted that “[t]he specification repeatedly highlights
5 [the] private-listening feature of the claimed invention. And in each repetition, the specification
6 states that private listening is ‘without interference’ from other users’ wireless audio transmission
7 devices.” *Id.* at 1064. In addition, the prosecution history confirmed the above construction of the
8 term. “During prosecution of the related parent patent, the applicant explained that term ‘virtually
9 free from interference’ results in the ability to listen without eavesdropping.” *Id.* at 1064-65.

10 While the court admitted that it had not defined the term “in a technical sense,” it explained that

11 the lack of a technical definition does not render the term indefinite.
12 As demonstrated by the specification and prosecution history
13 discussed above, the applicant used the term "interference" in a non-

1 technical manner to simply mean that the wireless headphone user is
2 able to listen without eavesdropping. This interpretation is
3 consistent with the specification and prosecution history and
4 provides a clear line such that it informs those skilled in the art
5 about the scope of the invention with reasonable certainty. For the
6 purposes of definiteness, the term is not required to have a technical
7 measure of the amount of interference.

8 *Id.* at 1066.

9 In the instant case, the Court does not have a sufficient record to make a determination on
10 indefiniteness as the Federal Circuit did in *One-E-Way*. While, as IPT notes, the ‘841 patent does
11 provide one example of what constitutes “low profile,” *see, e.g.*, col. 4:1-19 (chart reflecting
12 typical invention dimensions),⁴ it is not clear what height would take a base plate outside of the
13 category of “low profile.” *Cf. Core Wireless Licensing S.A.R.L. v. Apple Inc.*, No. 15-cv-05008-
14 PSG, 2016 U.S. Dist. LEXIS 72935, at *35-36 (N.D. Cal. June 3, 2016) (finding the term
15 “substantially impair the quality of the user information” indefinite; noting that, “[a]t least on one
16 point, the specification seems clear: stealing a single frame would fall within the claimed
17 invention[,] [b]ut the edges of the claim are murkier” and based on the ““zone of uncertainty,””
18 concluding indefiniteness); *see also Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371
19 (Fed. Cir. 2014) (stating that “a patent does not satisfy the definiteness requirement of § 112
20 merely because ‘a court can ascribe *some* meaning to a patent's claims’[;] [t]he claims, when read
21 in light of the specification and the prosecution history, must provide objective boundaries for
22 those of skill in the art,” and “a term of degree fails to provide sufficient notice of its scope if it
23 depends ‘on the unpredictable vagaries of any one person’s opinion’”) (emphasis in original).

24 At the hearing, IPT contended that one skilled in the art would be able to ascertain and
25 describe the boundaries of “low profile” perhaps based on prior art and/or dimensions of HDDs at
26 the time. But no evidence has been presented by either party on what one skilled in the art would
27 or would not know. Accordingly, at this juncture of the proceedings, the Court finds that “low
28 profile” is a limitation on the invention but specific construction of the term – including whether

⁴ Column 4 of the patent indicates that the typical invention dimension for $H_H + T_{BP}$ is 0.269mm + 0.150mm, or 0.419mm. Thus, one skilled in the art would infer that 0.419mm would be low profile.

1 or not the term is sufficiently definite – is otherwise not possible based on the record before the
2 Court at this time. Nor is the Court prepared at this juncture to rule on indefiniteness as a matter
3 of law. Defendants may, in the future, seek a ruling on indefiniteness after further development of
4 the record.

5 **III. CONCLUSION**

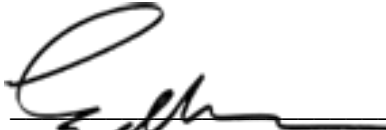
6 For the foregoing reasons, the Court finds that the terms “low profile” and “base plate” –
7 although appearing in the preamble only – are limitations on the invention claimed in the ‘841
8 patent. In contrast, the term “optimized” is not a limitation.

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10 **IT IS SO ORDERED.**

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12 Dated: February 1, 2018

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15 EDWARD M. CHEN
16 United States District Judge
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