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4 UNITED STATES DISTRICT COURT
5 NORTHERN DISTRICT OF CALIFORNIA
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7 INTRI-PLEX TECHNOLOGIES, INC.,

8 Plaintiff,

9 v.

10 NHK INTERNATIONAL CORPORATION,
11 et al.,

12 Defendants.

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

PUBLIC/REDACTED VERSION

**ORDER DENYING DEFENDANTS'
MOTION FOR SUMMARY JUDGMENT
OF INVALIDITY**

Docket No. 90

13 Plaintiff Intri-Plex Technologies, Inc. (“IPT”) has sued multiple companies (namely, two
14 NHK entities and two Seiko entities) for infringement of its ‘841 patent. The ‘841 patent is titled
15 “Optimized Low Profile Swage Mount Base Plate Attachment of Suspension Assembly for Hard
16 Disk Drive.” As reflected by the title, the patent relates to hard disk drives (“HDDs”). More
17 specifically, the patent concerns a component – known as a “base plate” – of a larger structure that
18 is ultimately used to help in the writing data to and reading data from the HDD surfaces.

19 In February 2018, the Court issued its claim construction order with respect to the ‘841
20 patent. See Docket No. 77 (order). One of the parties’ disputes concerned the term “low profile.”
21 The Court held that “low profile” – a term used only in the preamble of the relevant claims – was a
22 limitation on the invention but found that specific construction of the term, including whether or
23 not it was sufficiently definite, was not possible based on the record before it. See Docket No. 77
24 (Order at 15-16). Defendants now move for summary judgment on invalidity, arguing that there is
25 no genuine dispute of material fact that the term “low profile” is indefinite, and thus the ‘841
26 patent invalid.

27 Having considered the parties’ briefs and accompanying submissions, the oral argument of
28 counsel, and all other evidence of record, the Court hereby **DENIES** Defendants’ motion for

1 summary judgment. The Court further construes the term “low profile” as discussed below.

2 **I. DISCUSSION**

3 A. Legal Standard

4 Federal Rule of Civil Procedure 56 provides that a “court shall grant summary judgment
5 [to a moving party] if the movant shows that there is no genuine dispute as to any material fact and
6 the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). An issue of fact is
7 genuine only if there is sufficient evidence for a reasonable jury to find for the nonmoving party.
8 See *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248-49 (1986). “The mere existence of a
9 scintilla of evidence . . . will be insufficient; there must be evidence on which the jury could
10 reasonably find for the [nonmoving party].” *Id.* at 252. At the summary judgment stage, evidence
11 must be viewed in the light most favorable to the nonmoving party and all justifiable inferences
12 are to be drawn in the nonmovant’s favor. See *id.* at 255.

13 Where a defendant moves for summary judgment based on an affirmative defense (i.e., an
14 issue on which it bears the burden of proof), the defendant must establish “all of the essential
15 elements of the . . . defense to warrant judgment in [its] favor.” *Martin v. Alamo Cmty. College*
16 *Dist.*, 353 F.3d 409, 412 (5th Cir. 2003) (internal quotation marks omitted; emphasis omitted); see
17 also *Clark v. Capital Credit & Collection Servs.*, 460 F.3d 1162, 1177 (9th Cir. 2006) (noting that
18 a defendant bears the burden of proof at summary judgment with respect to an affirmative
19 defense).

20 Here, Defendants’ claim of indefiniteness is an affirmative defense. Defendants have the
21 burden of proving the essential elements of indefiniteness by clear and convincing evidence. See
22 *Titan Tire Corp. v. Case New Holland, Inc.*, 566 F.3d 1372, 1376 (Fed. Cir. 2009) (stating that,
23 because “an issued patent comes with a statutory presumption of validity under 35 U.S.C. § 282 . .
24 . . , an alleged infringer who raises invalidity as an affirmative defense has the ultimate burden of
25 persuasion to prove invalidity by clear and convincing evidence”).

26 B. General Law on Indefiniteness

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28 The Patent Act requires inventors to claim their invention in “full,
clear, concise, and exact terms.” 35 U.S.C. § 112. This

1 indefiniteness requirement is “part of the delicate balance the law
2 attempts to maintain between inventors, who rely on the promise of
3 the law to bring the invention forth, and the public, which should be
4 encouraged to pursue innovations, creations, and new ideas beyond
5 the inventor’s exclusive rights.” *Festo Corp. v. Shoketsu Kinzoku
6 Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002). This balance
7 recognizes that all claims suffer from “the inherent limitations of
8 language,” but also that claims must “be precise enough to afford
9 clear notice of what is claimed.” *Nautilus, Inc. v. Biosig
10 Instruments, Inc.*, 134 S. Ct. 2120, 2128-29 (2014). This balance
11 permits “[s]ome modicum of uncertainty” to “ensur[e] the
12 appropriate incentives for innovation,” but it also provides a
13 “meaningful definiteness check” to prevent patent applicants from
14 “inject[ing] ambiguity into their claims.” *Id.* (internal quotations
15 omitted). Recognizing this balance, the Supreme Court articulated
16 the test for indefiniteness as “requir[ing] that a patent’s claims,
17 viewed in light of the specification and prosecution history, inform
18 those skilled in the art about the scope of the invention with
19 reasonable certainty.” *Id.* at 2129. This test “mandates clarity,
20 while recognizing that absolute precision is unattainable.”

21 *One-E-Way, Inc. v. ITC*, 859 F.3d 1059, 1062-63 (Fed. Cir. 2017) (emphasis added); see also
22 *Takeda Pharm. Co. v. Mylan Inc.*, No. 13-CV-04001-LHK, 2014 U.S. Dist. LEXIS 159527, at
23 *13-14 (N.D. Cal. Nov. 11, 2014) (noting that, prior to *Nautilus*, “the Federal Circuit applied an
24 ‘insolubly ambiguous’ standard to indefiniteness questions” but “the Supreme Court rejected the
25 insolubly ambiguous standard and replaced it with a ‘reasonable certainty’ standard”).

26 Notably,

27 [w]hen a “word of degree” is used, the court must determine
28 whether the patent provides “some standard for measuring that
degree.” . . . Claim language employing terms of degree has long
been found definite where it provided enough certainty to one of
skill in the art when read in the context of the invention.

29 *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015) (quoting *Enzo
30 Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1332 (Fed. Cir. 2010)). “[A] term of degree fails
31 to provide sufficient notice of its scope if it depends ‘on the unpredictable vagaries of any one
32 person’s opinion.’” *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014)
33 (noting that the term “unobtrusive manner” is “highly subjective”).

34 Whether a claim is indefinite or definite is a question of law. See *DDR Holdings, LLC v.
35 Hotels.com, L.P.*, 773 F.3d 1245, 1260 (Fed. Cir. 2014). But while “[i]ndefiniteness is . . . a legal
36 determination arising out of the court’s performance of its duty construing the claims,”
37 “definiteness . . . is amenable to resolution by the jury where the issues are factual in nature.” *BJ*

1 Servs. Co. v. Halliburton Energy Servs., 338 F.3d 1368, 1372 (Fed. Cir. 2003); see also Alfred E.
2 Mann Found. for Sci. Research v. Cochlear Corp., 841 F.3d 1334, 1341 (Fed. Cir. 2016) (stating
3 that “[t]he ultimate determination of indefiniteness is a question of law that we review de novo,
4 although any factual findings by the district court based on extrinsic evidence are reviewed for
5 clear error”); Dow Chem. Co. v. NOVA Chems. Corp. (Can.), 809 F.3d 1223, 1226 (Fed. Cir.
6 2015) (stating that “[w]e have consistently permitted courts to submit legal questions which
7 contain underlying factual issues, like obviousness, enablement, or indefiniteness, to the jury”).

8 C. IPT’s Arguments

9 IPT opposes Defendants’ summary judgment motion on two main grounds: (1) the motion
10 is premature and (2) Defendants have not met their burden of proving indefiniteness by clear and
11 convincing evidence. With respect to the latter, IPT argues that “the evidence of record
12 unequivocally shows that a person of ordinary skill in the art would understand [the term ‘low
13 profile’] with reasonable certainty,” Opp’n at 1, but, at the very least, there is a genuine dispute of
14 material fact as to whether one of ordinary skill in the art would understand the scope of the term
15 with reasonable certainty. Each argument is addressed below.

16 D. Rule 56(d)

17 IPT’s first argument is that the summary judgment motion is premature. In evaluating this
18 argument, the Court begins with Rule 56(d), which provides that, “[i]f a nonmovant shows by
19 affidavit or declaration that, for specified reasons, it cannot present facts essential to justify its
20 opposition [to the summary judgment motion],” a court has several options. Fed. R. Civ. P. 56(d).
21 The court may “defer considering the motion or deny it,” “allow time to obtain affidavits or
22 declarations or to take discovery,” or “issue any other appropriate order.” Id.

23 Here, IPT has not provided an affidavit or declaration as to why it cannot present facts
24 essential to justify its opposition to the summary judgment motion. Rather, it has simply provided
25 argument on the issue. For that reason alone, the Rule 56(d) argument should arguably be
26 rejected.

27 In any event, on the merits, IPT’s argument is problematic. IPT asserts that more
28 discovery is needed on the issue of indefiniteness, particularly as fact discovery, let alone expert

1 discovery, has not been completed. IPT admits that it has taken the deposition of Dr. Bogy, the
2 expert who submitted a declaration in support of Defendants’ summary judgment motion. See
3 Opp’n at 3. But IPT contends that it needs to do follow-up work based on that declaration and/or
4 deposition. See Opp’n at 5-6. However, it is far from clear that the follow-up work desired by
5 IPT is essential in order for it to mount an opposition to the summary judgment motion. Indeed,
6 that IPT also included substantive argument in its opposition brief – substantial argument at that,
7 including argument based on its own expert’s declaration – indicates that the follow-up work is
8 not essential. Accordingly, the Court focuses on the merits – i.e., whether Defendants have met
9 their burden of proving indefiniteness by clear and convincing evidence.

10 E. Indefiniteness

11 As indicated above, a patent claim is indefinite if, when “read in light of the specification
12 delineating the patent, and the prosecution history, [the claim] fail[s] to inform, with reasonable
13 certainty, those skilled in the art about the scope of the invention.” *Nautilus*, 134 S. Ct. at 2120.
14 Although *Nautilus* makes reference to intrinsic evidence (i.e., the patent specification and
15 prosecution history), a court may consider extrinsic evidence in ascertaining the knowledge of
16 those skilled in the art. Cf. *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir.
17 2017) (stating that “any factual findings about extrinsic evidence relevant to the question [of
18 indefiniteness], such as evidence about knowledge of those skilled in the art, are reviewed for
19 clear error”).

20 In the instant case, both parties have provided extrinsic evidence – i.e., expert testimony –
21 because the intrinsic evidence is limited. All that the intrinsic evidence reflects is as follows:

- 22 • That a base plate with a height of 0.419 mm is considered low profile. This is
23 established by the ‘841 specification which provides “typical invention
24 dimension[s].” ‘841 patent, col. 4:1-17) (reflecting the following typical invention
25 dimensions: base plate thickness of 0.150 mm and hub overall height of 0.269 mm,
26 for a total of 0.419 mm). However, this information alone does not establish or
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1 suggest the limit of what constitutes a “low profile” base plate.¹

- 2 • That a base plate with a height of 0.454 mm is considered low profile. This is
3 established by one of the ‘841 patent’s dependent claims. See ‘841 patent, claim 9
4 (using the following dimensions: base plate thickness of 0.16 mm and hub overall
5 height of 0.294 mm, for a total of 0.454 mm); see also Bogy Depo. at 83
6 (discussing claim). However, as above, this information does not establish or
7 suggest the limit of what constitutes a “low profile” base plate.
- 8 • That, per the ‘841 specification, it is “desirable to provide a base plate that has a
9 lower profile than a conventional base plate, a torque retention capability
10 comparable to the prior art and a reduced pre-load change caused by the swaging
11 process.” ‘841 patent, col. 2:7-10; see also Kiblawi Decl., Ex. B (Hyatt Aff. ¶ 5)
12 (as part of the prosecution history for the ‘841 patent, testifying that “there was a
13 long felt need for the invention as evidenced by customers requiring a low profile
14 base plate that has a lower profile than a conventional base plate, a torque retention
15 capability comparable to existing products with a reduced pre-load change caused
16 by the swaging process, needs that are well known in the industry wherein disk
17 drives are becoming smaller and faster”). However, this information does not
18 provide any explanation as to what is considered a conventional base plate.
- 19 • That, one of the references cited in the ‘841 patent – namely, the Braunheim patent
20 (the ‘389 patent), filed two years before the ‘841 patent – described a preferred
21 embodiment of a “low profile swage mount” as having a base plate height of 0.348
22 mm. See Kiblawi Decl., Ex. C (Braunheim patent, col. 6:33-48) (reflecting base
23 plate thickness of 0.203 mm and hub overall height of 0.145 mm, for a total of
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25 ¹ Contrary to what Defendants suggest, the fact that the “typical prior art” had basically the same
26 base plate height, see ‘841 patent, col. 4:17-17 (reflecting base plate thickness of 0.150 mm and
27 hub overall height of 0.270 mm, for a total of 0.420 mm), does not raise confusion as to what “low
28 profile” means. The invention claimed in the ‘841 patent is an optimized low profile base plate –
optimized in the sense that the base plate meets certain geometry metric equations. The “typical
prior art” could have a low profile base plate but not be optimized. Hence, reference to “typical
prior art” does not define the limit of “low profile.”

1 0.348 mm). However, similar to above, this information does not establish or
2 suggest the limit of what constitutes a “low profile” base plate.

3 In its papers, IPT argues that the Braunheim patent does, in fact, provide some context as
4 to what is not considered low profile. In support, IPT cites the following part of the Braunheim
5 specification:

6 A particular and unexpected relationship deemed critical to the
7 successful operation of the swage mount of the present invention
8 involves the relative diameters of the base plate opening D_{BP} , and
9 the hub inner swaging surface D_{ID} . It has been found by applicant
10 that if D_{ID} is at least 85% of the diameter of D_{BP} , but no greater than
11 D_{BP} , **then the swage mount vertical profile may be dramatically
reduced by at least a factor of three** while still maintaining
adequate torque retention. In comparison, conventional swage
mounts typically have a relationship whereby D_{ID} is no greater than
84% of D_{BP} .

12 Braunheim patent, col. 6:11-21 (emphasis added). IPT argues that, if the base plate height in the
13 preferred embodiment is 0.348 mm (as set forth in Table 1 of the Braunheim specification), then a
14 conventional base plate height is three times greater – i.e., about 1.044 mm; thus, a 1 mm base
15 plate height is not considered low profile. See Dennison Decl. ¶ 31(a). However, this language is
16 not as unequivocal as IPT contends. All that the Braunheim specification appears to state is that a
17 swage mount vertical profile may be reduced by a factor of three, but it is not clear that that is
18 compared to a quantified vertical profile of a conventional swage mount. A comparison to a
19 conventional swage mount is made only with respect to the relationship between D_{ID} and D_{BP} ; it
20 does not clearly establish the absolute height of the conventional (versus “low profile”) swage
21 mount. Whether the patent implicitly assumes a base plate height of 1.044 mm is not “low
22 profile” is, at best, ambiguous.

23 The Court therefore looks to the extrinsic evidence presented by the parties as to what the
24 understanding (if any) of a person of ordinary skill in the art would be. As indicated above, the
25 extrinsic evidence presented is expert testimony and attached exhibits. Mr. Dennison is IPT’s
26 expert; Dr. Bogy is Defendants’ expert.

27 According to IPT’s expert, Mr. Dennison, the term “low profile” is used to describe certain
28 HDDs that first came to market in the late 1980s – more specifically HDDs with a form factor (or

1 size) of 3.5” or 2.5”, which was smaller than the “full-height” or “half-height” HDDs. See
2 Dennison Decl. ¶ 22(b) (testifying that “the very first 1-inch high 3.5-inch form factor HDD came
3 to market in 1988”); Dennison Depo. at 104 (testifying that, in 1990, the industry was largely still
4 designing half-height and full-height HDDs). The term “low profile” with respect to HDDs was
5 used at least as early as 1991. See Dennison Decl. ¶ 21(a) (noting that “[a] 1991 specification
6 sheet for the Fujitsu M263x family of HDDs describes the designs as a ‘Low-profile, 45-90 MB
7 2.5-inch Winchester disk drive’”); see also Dennison Decl. ¶ 21(b)-(d) (discussing three other
8 HDDs described as low profile). In or about 1991, a shift began away from the half-height HDDs
9 and toward the low profile HDDs, and low profile HDDs were in demand by the mid-1990s. See
10 Dennison Depo. at 104-05. In fact, low profile HDDs “became so ubiquitous that they even
11 dropped the term ‘low profile’ from the sales literature because everybody was low profile.”
12 Dennison Depo. at 105; see also Dennison Decl. ¶ 20. The low profile HDDs (i.e., 3.5” and 2.5”
13 HDDs) have a height of one inch; this is in contrast to, e.g., the half-height HDDs which are 1.625
14 inches tall. See Dennison Depo. at 7-9. Since the late 1980s, the definition of low profile HDDs
15 has remained the same – i.e., HDDs with a height of one inch – although HDDs with lower heights
16 have been developed. See Dennison Depo. at 14-15.

17 According to Mr. Dennison, components within low profile HDDs are also called low
18 profile. See Dennison Depo. at 15-16. That is, “if [a component] fits in a one-inch [HDD], it’s –
19 it’s low profile. But what has happened is we have made them a shorter and shorter Z-height [i.e.,
20 vertical height] so that you can fit more disks in that one-inch form factor.” Dennison Depo. at
21 16; see also Dennison Depo. at 107 (testifying that “low profile came to mean suitable for
22 inclusion in this form factor”).

23 Defendants’ expert, Dr. Bogy, did not provide testimony that materially disputed Mr.
24 Dennison’s. For example, Dr. Bogy agreed that the term “low profile” was probably being used in
25 the industry in the mid-1990s with respect to the form factor of disk drives and that, in the
26 nineties, profiles of base plates (one of the components in HDDs) were often referred to as low
27 profile as well. See Bogy Depo. at 60-61, 92-93, 95.

28 In light of the above, the Court concludes that Defendants have not demonstrated by clear

1 and convincing evidence that the term “low profile” is indefinite. That is, low profile components
2 (including low profile base plates) had contextual meaning to those skilled in the art – it references
3 those components used in low profile HDDs that were one-inch in height or less. Defendants have
4 thus failed to show by clear and convincing evidence that a person of ordinary skill in the art
5 would fail to understand with reasonable certainty what is meant by “low profile” base plate. Cf.
6 *Apple Inc. v. Samsung Elecs. Co.*, 786 F.3d 983, 1002-1003 (Fed. Cir. 2015) (concluding that term
7 “substantially centered” was not indefinite based on, inter alia, testimony offered by plaintiff’s
8 expert), *rev’d on other grounds by Samsung Elecs. Co. v. Apple Inc.*, 137 S. Ct. 429 (2016);
9 *Freeny v. Apple Inc.*, No. 2:13-CV-00361-WCB, 2014 U.S. Dist. LEXIS 120446, at *13-19 (E.D.
10 Tex. Aug. 28, 2014) (finding that term “low power communication signals” was not indefinite
11 based on, inter alia, testimony offered by plaintiff’s expert).

12 F. Construction of “Low Profile”

13 The issue remains as to what construction should be given the term “low profile” base
14 plate. There does not appear to be any disputed facts that would necessitate deferral of
15 construction of the term. Cf. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 838 (2015)
16 (“While we held in *Markman* that the ultimate issue of the proper construction of a claim should
17 be treated as a question of law, we also recognized that in patent construction, subsidiary
18 factfinding is sometimes necessary.”). Taking into account both the intrinsic and extrinsic
19 evidence, the Court finds that a low profile refers to a base plate with a vertical height small
20 enough such that the base plate fits within a low profile HDD, i.e., a HDD no taller than one inch.
21 As indicated by the above, this definition is supported by IPT’s expert, Mr. Dennison. See
22 *Dennison Depo.* at 16 (testifying that, “if [a component] fits in a one-inch [HDD], it’s – it’s low
23 profile[;] [b]ut what has happened is we have made them a shorter and shorter Z-height [i.e.,
24 vertical height] so that you can fit more disks in that one-inch form factor”); see also *Dennison*
25 *Depo.* at 107 (testifying that “low profile came to mean suitable for inclusion in this form factor”).
26 Defendants present no contrary evidence.

27 To the extent IPT contends that a 1 mm-high base plate is not a low profile base plate, the
28 Court rejects that construction. As Defendants point out, the Takagi patent (the ‘982 patent),

1 which was filed in April 1995 but claims a foreign application priority date of September 1991,
2 expressly discloses a low profile HDD, see Takagi patent, col. 3:56-57 (stating that “[t]he present
3 invention provides a low profile or low height disk drive”²), but the height of the base plate
4 described therein is 1 mm. Even IPT’s expert, Mr. Dennison, admits this. See Dennison Decl. ¶
5 31(c) (testifying that the Takagi patent “discloses a base plate with the same dimensions as the one
6 in the ‘860 Patent above, having an overall z-height of 1.00 mm”).³

7 IPT asserts that the Takagi patent simply reflects an attempt to use a conventional base
8 plate in a low profile HDD, but IPT has failed to establish that a 1 mm-high base plate is
9 considered conventional – i.e., used in the half- or full-height HDDs that preceded the low profile
10 HDDs. Although Mr. Dennison, IPT’s expert, claims that “a person of ordinary skill in the art . . .
11 would have known that a conventional base plate, for use in the older form-factor HDDs, would
12 typically have a total z-height of around 1mm” or greater,” Dennison Decl. ¶ 30, that statement is
13 conclusory. Mr. Dennison’s declaration reflects, at most, that 1 mm-high base plates were used in
14 the early 1990s but that does not thereby establish that such base plates were used only in half- or
15 full-height HDDs. Such base plates were in fact suitable for use in low profile HDDs.

16 The Court acknowledges IPT’s evidence suggesting that base plates with heights of 0.6
17 mm or less became more commonly used in low profile HDDs in the mid- to late 1990s. See, e.g.,
18 Dennison Decl. ¶ 33 et seq. This evidence, however, does not negate the fact that 1 mm-high base
19 plates could also be deemed low profile since they could fit in low profile HDDs. At most, that
20 evidence simply reflects a trend – recognized by both parties’ experts – that components,
21 including but not limited to base plates, got smaller and smaller over time. But that did not change
22 what qualified as “low profile” base plates at the time the ‘841 patent application was filed in
23 1998.

24 _____
25 ² As Defendants point out, the height of the HDD in Takagi is actually less than one inch. See
26 Takagi patent, col. 11:29-33 (stating that “[i]n accordance with the present invention, a disk drive
27 apparatus with one hard disk having an overall height of 12.7 mm [i.e., 0.5 inches] is attained. A
28 disk drive apparatus with two hard disks having an overall height of 17.00 mm [i.e., 0.669 inches]
is attained by the present invention”).

³ See also Dennison Decl. ¶ 32(e) [filed under seal] [REDACTED]

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II. CONCLUSION

For the foregoing reasons, the Court **DENIES** Defendants’ motion for summary judgment and construes the term “low profile” as follows: referring to a base plate with a vertical height small enough such that the base plate fits within a low profile HDD, i.e., a HDD no taller than one inch.

This order disposes of Docket No. 90.

IT IS SO ORDERED.

Dated: June 18, 2018



EDWARD M. CHEN
United States District Judge