

United States District Court  
Northern District of California

ALEKSANDR L. YUFA,

Plaintiff,

v.

TSI INCORPORATED, et al.,

Defendants.

Case No.: CV 09-01315-KAW

CLAIM CONSTRUCTION ORDER

On November 22, 2013, the Court held a claim construction hearing to construe the disputed terms of U.S. Patent No. 6,346,983 (“‘983 Patent”) pursuant to *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996). At the hearing, Plaintiff Dr. Aleksandr L. Yufa appeared pro se. Defendant TSI Incorporated appeared through its counsel, Bruce Little, R. Brian Irion, and Courtland Merrill. Upon review of the parties’ papers and having carefully considered their arguments and the relevant legal authority, the court rules as set forth below.

### I. BACKGROUND

Filed January 29, 1998, the ‘983 Patent is entitled “Methods and Wireless Communicating Particle Counting and Measuring Apparatus.” The patent concerns methods and devices for determining the existence, size, and quantity of airborne particles by utilizing a light beam. ‘983 Patent col. 1 l.5-10.

Plaintiff filed this action on March 25, 2009, alleging that Defendant’s predecessor-in-interest, Adams Instruments, infringed on Plaintiff’s ‘983 Patent by manufacturing and selling wireless communication products believed to be utilizing technologies covered by the ‘983 Patent. (Original Compl., Dkt. No. 1 at 4; Am. Compl., Dkt. No. 91¶ 16.) The case was stayed pending the ongoing reexamination of the ‘983 Patent by the U.S. Patent and Trademark Office (PTO). (Dkt. No. 37.) Ultimately, only claims 6-8 survived the PTO’s reexamination process and

1 remain valid, but with altered patent language. *See* '983 Patent Reexamination Certificate, Dkt.  
2 No. 91-3.

## 3 **II. LEGAL STANDARD**

4 Claim construction is a matter of law, to be decided by the Court. *Markman*, 517 U.S. at  
5 387. In accordance with the Patent Local Rules of the Northern District, the parties submit their  
6 joint selection of the ten disputed terms that are significant in resolving the case as well as their  
7 proposed definitions for construction. *See* Patent L.R. 4-3. After the *Markman* hearing and upon  
8 consideration of the parties' briefs, the Court issues an order construing the meaning of the  
9 disputed terms. The Court's construction then becomes the legally operative meaning of the  
10 disputed terms that governs further proceedings in the case. *See Chimie v. PPG Indus., Inc.*, 402  
11 F.3d 1371, 1377 (Fed. Cir. 2005).

12 In construing claims, the court must begin with an examination of the claim language  
13 itself. The terms used in the claims are generally given their "ordinary and customary meaning."  
14 *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-13 (Fed. Cir. 2005); *see also Renishaw PLC v.*  
15 *Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998) ("The claims define the scope  
16 of the right to exclude; the claim construction inquiry, therefore, begins and ends in all cases with  
17 the actual words of the claim."). This ordinary and customary meaning "is the meaning that the  
18 terms would have to a person of ordinary skill in the art in question at the time of the  
19 invention...." *Phillips*, 415 F.3d at 1313. A patentee is presumed to have intended the ordinary  
20 meaning of a claim term in the absence of an express intent to the contrary. *York Products, Inc. v.*  
21 *Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1572 (Fed. Cir. 1996).

22 Generally speaking, the words in a claim are to be interpreted "in light of the intrinsic  
23 evidence of record, including the written description, the drawings, and the prosecution history, if  
24 in evidence." *Teleflex, Inc. v. Ficosa North Am. Corp.*, 299 F.3d 1313, 1324-25 (Fed. Cir. 2002)  
25 (citations omitted); *see also Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir.  
26 2005) (court looks at "the ordinary meaning in the context of the written description and the  
27 prosecution history"). "Such intrinsic evidence is the most significant source of the legally  
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1 operative meaning of disputed claim language.” *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d  
2 1576, 1582 (Fed. Cir. 1996).

3 With regard to the intrinsic evidence, the court’s examination begins, first, with the claim  
4 language. *See id.* Specifically, “the context in which a claim is used in the asserted claim can be  
5 highly instructive.” *Phillips*, 415 F.3d at 1314. As part of that context, the court may also consider  
6 the other patent claims, both asserted and unasserted. *Id.* For example, as claim terms are  
7 normally used consistently throughout a patent, the usage of a term in one claim may illuminate  
8 the meaning of the same term in other claims. *Id.* The court may also consider differences  
9 between claims to guide in understanding the meaning of particular claim terms. *Id.*

10 Second, the claims “must [also] be read in view of the specification, of which they are a  
11 part.” *Id.* at 1315. When the specification reveals a special definition given to a claim term by the  
12 patentee that differs from the meaning it would otherwise possess, the inventor’s lexicography  
13 governs. *Id.* at 1316. Indeed, the specification is to be viewed as the “best source” for  
14 understanding a technical term, informed as needed by the prosecution history. *Id.* at 1315. As the  
15 Federal Circuit stated in *Phillips*, the specification is “the single best guide to the meaning of a  
16 disputed term,” and “acts as a dictionary when it expressly defines terms used in the claims or  
17 when it defines terms by implication.” 415 F.3d at 1321.

18 Limitations from the specification, such as from the preferred embodiment, cannot be read  
19 into the claims absent an express intention to do so. *Teleflex*, 299 F.3d at 1326 (“The claims must  
20 be read in view of the specification, but limitations from the specification are not to be read into  
21 the claims.”) (citations omitted); *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed.  
22 Cir. 2002) (“a patentee need not describe in the specification every conceivable and possible  
23 future embodiment of his invention.”); *Altiris v. Symantec Corp.*, 318 F.3d 1363, 1372 (Fed. Cir.  
24 2003) (“resort to the rest of the specification to define a claim term is only appropriate in limited  
25 circumstances”). To protect against this, the court should not consult the intrinsic evidence until  
26 after reviewing the claims in light of the ordinary meaning of the words themselves. *Texas Digital  
27 Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1204-05 (Fed. Cir. 2002) (to act otherwise  
28

1 “invites a violation of our precedent counseling against importing limitations into the claims”  
2 (citations omitted).

3 Finally, as part of the intrinsic evidence analysis, the court “should also consider the  
4 patent’s prosecution history, if it is in evidence.” *Phillips*, 415 F.3d at 1317. The court should take  
5 into account, however, that the prosecution history “often lacks the clarity of the specification”  
6 and thus is of limited use for claim construction purposes. *Id.*

7 In most cases, claims can be resolved based on intrinsic evidence. *See Vitronics*, 90 F.3d  
8 at 1583. Only if an analysis of the intrinsic evidence fails to resolve any ambiguity in the claim  
9 language may the court then rely on extrinsic evidence, such as expert and inventor testimony,  
10 dictionaries, and learned treatises. *See Vitronics*, 90 F.3d at 1583 (“In those cases where the  
11 public record unambiguously describes the scope of the patented invention, reliance on any  
12 extrinsic evidence is improper”). The court, however, generally views extrinsic evidence as less  
13 reliable than the patent and its prosecution history in determining how to read claim terms, and its  
14 consideration is within the court’s sound discretion. *See Phillips*, 415 F.3d at 1318-19.

### 15 **III.DISCUSSION**

16 The parties initially disputed construction of ten terms or phrases contained within the  
17 claims of the patent-in-suit. (Revised Joint Claim Construction Statement, “Rev. Joint  
18 Statement,” Dkt. No. 130, Ex. A at 3.) At the hearing, the parties agreed on definitions to the first  
19 five disputed terms, so only terms 6-10 will be discussed in detail below.

#### 20 **1. “counting and measuring particles”**

21 The term “counting and measuring particles” is found in claim 6. At the hearing, the  
22 parties agreed to use the ordinary meaning without further construction, so the court declines to  
23 construe this term and, instead, lets the plain and ordinary meaning govern. (Transcript of Claim  
24 Construction Hearing, “Hr’g Tr.,” Dkt. No. 151 at 15, 17-18.)

#### 25 **2. “light detecting”**

26 The term “light detecting” is founds in claims 6 and 7. At the hearing, the parties agreed  
27 to use the ordinary meaning without further construction, so the court declines to construe this  
28 term and, instead, lets the plain and ordinary meaning govern. (Hr’g Tr. at 19-20.)

1           **3. “strobe pulse”**

2           The term “strobe pulse” is found in claims 6 and 8. At the hearing, the parties agreed to  
3           construe this term as “electric pulses with a uniform period of time between each pulse,” so the  
4           court will construe the term as such. (Hr’g Tr. at 43.)

5           **4. “strobe pulse packages”**

6           The term “strobe pulse packages” is found in claim 6. At the hearing, the parties agreed to  
7           construe this term as “a sequential group of strobe pulses,” so the court will construe the term as  
8           such. (Hr’g Tr. at 50-52.)

9           **5. “conjunction”**

10          The term “conjunction” is found in claims 6 and 8. At the hearing, the parties agreed to  
11          construe this term as “the act of joining.” (Hr’g Tr. at 52, 64.) This construction is limited, and is  
12          not to be applied to the derivative term “conjunctive means.” *Id.* at 55. Accordingly, the court  
13          will construe “conjunction” to mean the “act of joining.”

14          **6. “light detecting means”**

15          The term “light detecting means” is found in claims 6 and 7. This is a means-plus-  
16          function term, and is, therefore, governed by 35 U.S.C. § 112 ¶6.<sup>1</sup> Construction of a means-plus-  
17          function claim involves two steps: (1) defining the particular function of the claim limitation, and  
18          (2) identifying the corresponding structure for that function. *See, e.g., In re Aoyama*, 656 F.3d  
19          1293, 1296-97 (Fed. Cir. 2011).

20          The parties disagree as to both the relevant function and the structure. Under step one, the  
21          function must be construed to “include the limitations contained in the claim language, and only  
22          those limitations.” *Id.* at 1296-97 (quoting *Cardiac Pacemakers, Inc. v. St. Jude. Med., Inc.*, 296  
23          F.3d 1106, 1113 (Fed. Cir. 2002)). Defendant argues that the relevant function is “determining  
24          the presence of light.” In the Revised Joint Claim Construction Statement, Plaintiff’s proposed  
25          construction was “means (an instrument for attaining a purpose) providing light detecting (light

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27 <sup>1</sup> The ‘983 Patent was filed before the effective date of the Leahy Smith America Invents Act  
28 (“AIA”), which applies to patent applications filed on or after September 16, 2012. Therefore, all  
citations to § 112 refer to the pre-AIA statute, which contains paragraph numbers rather than  
lettered subsections.

1 detection).” (Rev. Joint Statement, Ex. A at 3.) At the hearing, Plaintiff argued that the function  
2 was not limited to determining the presence of light, but also the amount and intensity of light.  
3 Plaintiff’s opening and reply claim construction briefs provide no additional information in  
4 support of this construction. The ‘983 Patent, however, does provide support for Plaintiff’s  
5 revised proposal. *See* ‘983 Patent Reexamination Certificate col. 1 l. 20-27 (issued Aug. 14,  
6 2012). The patent’s limitations specify that the output of a “light detecting means” is “indicative  
7 of a size of said particles.” *Id.* at col. 1 l. 25-26. This indicates that the function of “light  
8 detecting means” is more than simply determining the presence of light, but rather includes the  
9 amount of light that is present, if any. Accordingly, the Court will construe the function as  
10 “determining the amount of light present.”

11 Under the second step, “structure disclosed in the specification is corresponding structure  
12 only if the specification or prosecution history clearly links or associates that structure to the  
13 function recited in the claim.” *In re Aoyama*, 656 F.3d at 1297 (citation omitted). At the hearing,  
14 Plaintiff proposed that the structure should be construed as a sensor. *See* ‘983 Patent fig. 2, col 3 l.  
15 31, col 3 l. 60 (filed Feb. 12, 2002)(figure of sensor). As Dr. Yufa argued at the hearing, the  
16 patent’s specifications explicitly provide that the apparatus utilizes sensors to detect the presence  
17 of light. *Id.* at col. 3 l. 60. This intrinsic evidence governs. *See Vitronics Corp.*, 90 F.3d at 1582.

18 Defendant requested that the structure be construed as “an instrument,” which would  
19 allow TSI to “challenge whether the sensors [Dr. Yufa] is referring to do, in fact, perform the  
20 function he says they do.” (Hr’g Tr. at 81-82.) This is not a proper subject for claim construction,  
21 and so will not be addressed at this juncture. Given the wording in the patent, however, “a  
22 sensor” appears to be a more accurate construction, as opposed to the more generic term  
23 “instrument” which has no basis in the record in light of the inclusion of sensors in the patent  
24 description and figures. Accordingly, the Court will construe the structure as “a sensor.”

25 **7. “current-voltage conversion means”**

26 The term “current-voltage conversion means” is found in claims 6 and 7. This is another  
27 means-plus-function term, and requires that both the function be defined and the corresponding  
28 structure be identified. *See* 35 U.S.C. § 112 ¶6; *see also In re Aoyama*, 656 F.3d 1293, 1296-97

1 (Fed. Cir. 2011). If the means-plus-function limitations lacks sufficient disclosure under 35  
2 U.S.C. § 112 ¶ 6, the claim is unpatentable as indefinite under 35 U.S.C. § 112 ¶ 2. *In re Aoyama*,  
3 656 F.3d at 1298.

4 At the hearing, the parties agreed that the function should be construed as “the conversion  
5 of output from a light detecting means to voltage value signals.” (Hr’g Tr. at 92.)

6 The parties disagree, however, in identifying the corresponding structure.<sup>2</sup> Plaintiff argues  
7 that “an analog-to-digital converter,” which is a device that converts analog signals to digital  
8 signals, is appropriate on the grounds that a person having ordinary skill in the art would be able  
9 to discern the scope of the invention. (Hr’g Tr. at 83, 86, 96:6-12.) The Court asked Plaintiff to  
10 identify any reference to such a device in the specifications or patent prosecution history, and,  
11 while he initially appeared unable to do so, he eventually pointed to column 7, line 57 of the ‘983  
12 Patent. There, the description of the invention provides that “[t]he current-voltage conversion  
13 means of the detected signal process means via an amplifying means is connected to a voltage-  
14 pulse conversion means....” ‘983 Patent col. 7 l. 56-67, fig. 8. Dr. Yufa explained that this  
15 described the analog-to-digital converter, which is common knowledge to those in the electronics  
16 field. (Hr’g Tr. 86:19-23.) This is supported by Figure 8, which identifies an analog-to-digital  
17 converter linked to the amplifying means. *See* ‘983 Patent fig. 8.

18 Defendant, on the other hand, advocated that the structure be “an instrument” if the Court  
19 declined to construe the structure as simply “structure.” (Hr’g Tr. at 92:1-2.) There is absolutely  
20 no basis for Defendant’s request to construe the term as a generic “instrument,” which is the same  
21 structure that Defendant advocated in lieu of the sensor in the previous disputed term. It appears  
22 that the only reason TSI would seek to have this term described in such a generic manner would  
23 be to support a future claim of invalidity on the grounds that the claim is indefinite. To the  
24 contrary, sufficient evidence exists to support a construction of the corresponding structure.

25 Accordingly, the Court finds that Dr. Yufa, as the inventor and acting as his own expert,<sup>3</sup>  
26 is a person of ordinary skill in the art, and in light of his eventual identification of the references

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28 <sup>2</sup> Neither Plaintiff nor Defendant provided much in the way of argument in their claim  
construction briefs, so the Court must heavily rely on the hearing transcript.

<sup>3</sup> Dr. Yufa has a Ph.D and has applied for and acquired at least five separate U.S. patents.

1 to structure in the patent language, the Court will construe the structure as “an analog-to-digital  
2 converter.”

3 **8. “amplifying means”**

4 The term “amplifying means” is found in claims 6 and 7. This is another means-plus-  
5 function term. At the hearing, the parties agreed that the term should be construed as “a structure,  
6 the function of which is to amplify voltage value signals.” (*See* Hr’g Tr. at 97.)

7 Upon further review, the Court is unwilling to construe the structure as a generic  
8 “structure” for the reasons set forth above. Instead, the Court will construe the function as “to  
9 amplify voltage value signals,” and the corresponding structure as “an amplifier.” *See* ‘983 Patent  
10 fig. 8; Hr’g Tr. at 97:9-15.

11 **9. “analog-digital form pulse duration conversion means”**

12 The term “analog-digital form pulse duration conversion means” is found in claims 6 and  
13 8. This is another means-plus-function term, so both the function and the corresponding structure  
14 must be construed.

15 TSI’s proposed definition is “a structure, the function of which is providing conversion of  
16 each said voltage value signals to a digital form pulse without using a reference voltage to convert  
17 each said voltage value signals.” (Def.’s Am. Brief at 16.) TSI relies on the patent language  
18 referencing “a detected signal processing means” (DSPM) in support of its definition. *See* ‘983  
19 Patent col. 5 l. 7. In reality, TSI’s proposed language mirrors the language in claim 6, which  
20 provides:

21 an analog-digital form pulse duration conversion means, **providing conversion of**  
22 **each said voltage value signals to a digital form pulse without using a**  
23 **reference voltage to convert each said voltage value signals**, wherein each said  
digital form pulse has a duration, which is adequate to a baseline duration of the  
appropriate output of said light detecting means;

24 ‘983 Patent Reexamination Certificate, col. 1 l. 29 - col. 2 l. 6 (emphasis added). Plaintiff  
25 proposed that the function be construed as the “conversion of the analog pulse form (the pulse of  
26 analog form) to the digital pulse form (to the pulse of digital form) having the same duration as  
27 the pulse of analog form.” (*See* Rev. Joint Statement, Ex. A at 6.) This definition does little to  
28 explain the concept to a layperson. Dr. Yufa objected to the inclusion of “without using a



1 reference voltage.” (Hr’g Tr. at 102). The basis for his argument, however, is directly  
2 contradicted by the patent language and the prosecution history, which required the use of  
3 “without reference voltage” to overcome prior art. *See* ‘983 Patent Reexamination Certificate, col.  
4 2 l. 1-2; Dr. Yufa’s June 8, 2012 Am. from the Reexamination of the ‘983 Patent, “Dr. Yufa’s  
5 2008 Am.,” Dkt. No. 120-2 at 81-83. As such, the function must be construed to include that  
6 limitation. Accordingly, after examining the ordinary meaning of the claim language, and taking  
7 into account the patent prosecution history, the Court will construe the function as “providing  
8 conversion of each said analog voltage value signals to a digital form pulse of the same duration  
9 without using a reference voltage.”

10 As to the structure, TSI again seeks to construe the structure as simply “a structure.”  
11 There is no basis for such a vague and indefinite construction. The Court, again, looks to the  
12 terms construed above and to Dr. Yufa’s identification of the structure at the hearing, where he  
13 identified the structure as “an analog-digital form pulse converter.” (Hr’g Tr. 103:2-3.) In  
14 addition, the Court also notes that Dr. Yufa’s not being a native English speaker, as well as his  
15 unfamiliarity with the terms of art in patent litigation, hinder his ability to articulate the  
16 corresponding “structure.”<sup>4</sup> Despite these preliminary obstacles, the claim construction process  
17 has enabled the Court to decipher Dr. Yufa’s patent language to comprehend the applicable  
18 structures that he is attempting to convey. Here, when Dr. Yufa refers to the “device” as an  
19 analog-digital form pulse duration conversion means (Hr’g Tr. 103:2-3), the corresponding  
20 structure should be interpreted as “an analog-digital form pulse converter.” *See* ‘983 Patent col.  
21 10 l. 14; claims 6 and 8. Therefore, the Court will construe the structure as “an analog-digital  
22 form pulse converter.”

23 **10. “strobe pulse generating means”**

24 The term “strobe pulse generating means” is found in claims 6 and 8. Again, this term  
25 invokes means-plus-function, so both the function and the corresponding structure must be  
26 construed.

27  
28 <sup>4</sup> During the hearing, TSI’s counsel brought to the Court’s attention Plaintiff’s confusion  
regarding “structure” as a common term of art in patent cases. (Hr’g Tr. 108:21-109:1.)

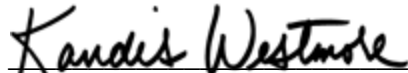


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10. For the term “strobe pulse generating means,” the function is construed as “to produce strobe pulses,” and the structure is construed as “a generator.”

IT IS SO ORDERED.

Dated: February \_\_\_\_, 2014

  
KANDIS A. WESTMORE  
United States Magistrate Judge