
**UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD**

CANFIELD SCIENTIFIC, INC.,
Petitioner

v.

MELANOSCAN LLC,
Patent Owner

Case No. IPR2017-02125

Patent No.: 7,359,748

**PATENT OWNER'S PRELIMINARY RESPONSE
PURSUANT TO 37 C.F.R. § 42.107**

TABLE OF CONTENTS

	<u>Page</u>
TABLE OF AUTHORITIES	iv
LIST OF EXHIBITS FOR IPR2017-02125	ix
I. INTRODUCTION.	1
II. PETITIONER’S ALLEGED GROUNDS.	2
III. THE PETITION IS BARRED BY 35 U.S.C. 315(A) AND THE BOARD LACKS THE JURISDICTION AND AUTHORITY TO INSTITUTE OR CONDUCT THIS IPR.	3
A. Canfield’s “Counterclaim in Reply” Amended Its Civil Action to Challenge Validity of the Patent and Statutorily Bars the Petition.	4
B. Canfield’s Invalidity Claim Is Not a “Counterclaim” Within the Meaning of Subsection 315(a)(3).	7
1. Principles of Statutory Interpretation.	7
2. The “Counterclaim” Exception of section 315(a)(3) Does Not Apply to Counterclaims in Reply.	10
a. The Ordinary, Contemporary Meaning of “Counterclaim” Is a Claim Made by Defendant Against Plaintiff, Not by Plaintiff Against Defendant, as Was Canfield’s Invalidity Challenge Here.	10
b. The Legislative History and Statutory Structure Support the Ordinary Meaning of “Counterclaim” as a Claim Made By Defendant Against Plaintiff, Not by Plaintiff Against Defendant.	11
c. Expanding the Interpretation of “Counterclaim” to Include a Counterclaim in Reply Would Frustrate Congress’s Intent and Lead to Absurd Results.	14

IV.	THE CHALLENGED CLAIMS ARE NOT UNPATENTABLE.....	18
A.	Development of the Invention.....	18
B.	The ‘748 Patent.....	22
C.	The Level of Skill in the Art.	23
D.	Claim Construction.	24
1.	“A specified imaging position”	25
2.	“Second means . . . for specifying an imaging position”	25
3.	“Predetermined distance relative to the specified imaging position” and “predetermined distance relative to the second means”	27
4.	“Centerline”	27
5.	“First means for receiving and enclosing a person or portion thereof”	29
6.	The Wherein Clause.....	30
E.	Claims 1-5, 8, 11, 30, 33-34, 46 and 51 Are Not Obvious over Voigt and Hurley.	33
1.	Summary of Voigt	34
2.	Summary of Hurley	36
3.	The Proposed Combination of Voigt and Hurley Does Not Teach or Provide the Invention.	38
4.	Voigt Teaches Away from the Invention.....	42
5.	The Proposed Combination Would Render Voigt Inoperable for Its Intended Purpose.	42
6.	There Was No Reasonable Expectation of Success	43

7.	The Proposed Combination Would Improperly Change the Principle of Operation of Voigt.	45
F.	Claims 1-4, 8, 11, 30, 33-34 and 51 Are Not Obvious over Voigt And Crampton.....	45
1.	Summary of Crampton.....	46
2.	The Proposed Combination of Voigt and Crampton Embodiment 1 Does Not Teach or Provide the Invention.	47
3.	The Claims Are Not Obvious in View of Voigt and Crampton Embodiment 2.	48
G.	Hurley Does Not Render Claims 1-8, 11, 30, 33-34 and 46 Obvious.	52
H.	Claims 6-7 Are Not Obvious over Voigt, Hurley and Daanen.....	56
1.	Summary of Daanen.	56
2.	A POSA Would Not Have Modified Voigt and Hurley in View of Daanen, and If One Did, the Combination Would Not Provide the Claimed Invention.	57
I.	Claims 32 and 36 Are Not Obvious over Voigt, Crampton and Dye.	60
V.	CONCLUSION	60

TABLE OF AUTHORITIES

	Page(s)
FEDERAL CASES	
<i>Avid Tech., Inc. v. Harmonic, Inc.</i> , 812 F.3d 1040 (Fed. Cir. 2016)	32, 33
<i>Baker v. Borg Warner Morse Tec, Inc.</i> , 2012 WL 195011 (S.D.W. Va. 2012)	5
<i>BedRoc Ltd., LLC v. United States</i> , 541 U.S. 176 (2004)	8
<i>Boelens v. Redman Homes, Inc.</i> , 759 F.2d 504 (5th Cir. 1985)	5
<i>BP Am. Prod. Co. v. Burton</i> , 549 U.S. 84 (2006)	11
<i>Broadcom Corp. v. Emulex Corp.</i> , 732 F.3d 1325 (Fed. Cir. 2013)	43, 44
<i>Capo, Inc. v. Dioptics Med. Prods., Inc.</i> , 387 F.3d 1352 (Fed. Cir. 2004)	15
<i>Century Pac., Inc. v. Hilton Hotels Corp.</i> , 528 F. Supp. 2d 206 (S.D.N.Y. 2007)	5
<i>CFMT, Inc. v. Yieldup Int’l Corp.</i> , 349 F.3d 1333 (Fed. Cir. 2003)	33, 40, 48, 49, 54, 55, 58
<i>ERBE Elektromedizin GmbH v. Int’l Trade Comm’n</i> , 566 F.3d 1028 (Fed. Cir. 2009)	29
<i>In re Fine</i> , 837 F.2d 1071 (Fed. Cir. 1988)	45, 52, 54, 57, 58, 60
<i>In re Fritch</i> , 972 F.2d 1260 (Fed. Cir. 1992)	41, 55
<i>Fujitsu, Ltd. v. Nanya Tech. Corp.</i> , 2007 WL 1660694 (N.D. Cal. 2007)	17

<i>General Dynamics Land Sys. Inc. v. Cline</i> , 540 U.S. 581 (2004).....	8, 13
<i>In re Gordon</i> , 733 F.2d 900 (Fed. Cir. 1984).....	42
<i>In re Grasselli</i> , 713 F.3d 731 (Fed. Cir. 1983).....	42, 49, 52
<i>Hallstrom v. Tillamook Cty.</i> , 493 U.S. 20 (1993).....	4
<i>Heath v. Audatex N. Am., Inc.</i> , 2012 WL 177413 (E.D. Pa. 2012).....	5
<i>Hynix Semiconductor Inc. v. Rambus Inc.</i> , 645 F.3d 1336 (Fed. Cir. 2011).....	50, 51, 58, 59
<i>Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.</i> , 821 F.3d 1359 (Fed. Cir. 2016).....	34
<i>Jones v. United States</i> , 527 U.S. 373 (1999).....	13
<i>KSR Int’l Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007).....	33, 41, 42, 50, 51, 55, 58, 59
<i>Mass. Inst. of Tech. v. Shire Pharm.</i> , 839 F.3d 1111 (Fed. Cir. 2016).....	32, 33
<i>In re McLaughlin</i> , 443 F.2d 1392 (C.C.P.A. 1971).....	56
<i>McNeill v. United States</i> , 563 U.S. 816 (2011).....	9, 16, 17
<i>Metalcraft of Mayville, Inc. v. Toro Co.</i> , 848 F.3d 1358 (Fed. Cir. 2017).....	41, 55, 57
<i>In re NTP Inc.</i> , 654 F.3d 1279 (Fed. Cir. 2011).....	41, 57

<i>NTP, Inc. v. Research In Motion, Ltd.</i> , 418 F.3d 1282 (Fed. Cir. 2005)	7
<i>Nystrom v. Trex Co.</i> , 424 F.3d 1136 (Fed. Cir. 2002)	26
<i>Perrin v. United States</i> , 444 U.S. 37 (1979)	7, 10
<i>Philips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005)	29
<i>Polymer Indus. Prod. Co. v. Bridgestone/Firestone, Inc.</i> , 211 F.R.D. 312 (N.D. Ohio 2002)	5, 11
<i>In re Ratti</i> , 270 F.2d 810 (C.C.P.A. 1959)	45, 49, 57
<i>In re Robertson</i> , 169 F.3d 743 (Fed. Cir. 1999)	48, 49, 53
<i>Robinson v. Shell Oil Co.</i> , 519 U.S. 337 (1997)	8, 13
<i>Rockwell Int’l Corp. v. Unites States</i> , 549 U.S. 457 (2007)	5
<i>In re Royka</i> , 490 F.2d 981 (C.C.P.A. 1974)	33
<i>Sandifer v. U.S. Steel Corp.</i> , 134 S. Ct. 870 (2014)	8, 10
<i>Sharp Elecs. Corp. v. United States</i> , 124 F.3d 1447 (Fed. Cir. 1997)	9, 16
<i>Southeastern Indus. Tire Co., Inc., v. Duraprene Corp.</i> , 70 F.R.D. 585 (E.D. Pa. 1976)	5
<i>In re Translogic Tech., Inc.</i> , 504 F.3d 1249 (Fed. Cir. 2007)	24

<i>United States v. Brown</i> , 333 U.S. 18 (1948).....	9, 15
<i>Westwood Apex v. Contreras</i> , 644 F.3d 799 (9th Cir. 2011).....	7
<i>Yates v. United States</i> , 135 S. Ct. 1074 (2015).....	8
<i>In re Ybarra</i> , 259 B.R. 706 (S.D. Ill. 2007)	15, 16
<i>In re Zletz</i> , 893 F.2d 319 (Fed. Cir. 1989).....	25, 29
PTAB DECISIONS	
<i>Ariosa Diagnostics v. Isis Innovation Ltd.</i> , IPR2012-00022, Paper 20 (Feb. 12, 2013)	17, 18
<i>Endo Pharm., Inc. v. Depomed, Inc.</i> , IPR2014-00652, Paper 12 (Sep. 29, 2014)	33
<i>GTNX, Inc. v. Intrra, Inc.</i> , CBM 2014-00072, Paper 20 (Dec. 10, 2014)	6, 18
<i>St. Jude Med., Cardiology Div., Inc. v. Volcano Corp.</i> , IPR 2013-000258, Paper 29 (Oct. 16, 2013)	9, 15, 16
<i>TRW Auto. U.S., LLC v. Magna Elects., Inc.</i> , IPR2015-00949, Paper 7 (Sept. 17, 2015).....	24
FEDERAL STATUTES	
35 U.S.C. § 103	2, 3
35 U.S.C. § 112 ¶ 6.....	25, 26, 29, 30
35 U.S.C. § 313	1
35 U.S.C. § 314	2
35 U.S.C. § 315(a)	1, 3, 4, 6, 7, 10, 11, 12, 13, 14, 15, 17, 18

FEDERAL LEGISLATIVE HISTORY

153 Cong. Rec. E774 (daily ed. Apr. 18, 2007).....	14
157 Cong. Rec. S1375 (daily ed. Mar. 8, 2011)	12
H.R. Rep. No. 112-98 (June 1, 2011).....	15

RULES

Fed. R. Civ. P. 2.....	4
Fed. R. Civ. P. 3.....	4, 6
Fed. R. Civ. P. 7.....	11
Fed. R. Civ. P. 12(a)	15
Fed. R. Civ. P. 13(a)(1)(A)	7
Fed. R. Civ. P. 15.....	5

REGULATIONS

37 C.F.R. § 42.100(b)	24
37 C.F.R. § 42.107.....	1

OTHER AUTHORITIES

MPEP § 2111.01(I)	25
MPEP § 2143.01(V)	42
<i>Office Patent Trial Practice Guide</i> , 77 Fed. Reg. 48,756 (Aug. 14, 2012)	24

LIST OF EXHIBITS FOR IPR2017-02125

- Ex. 2001 Complaint, C.A. 2:16-cv-04636 (JMV) (D.N.J.)
- Ex. 2002 Answer, C.A. 2:16-cv-04636 (JMV) (D.N.J.)
- Ex. 2003 Counterclaim-in-Reply, C.A. 2:16-cv-04636 (JMV) (D.N.J.)
- Ex. 2004 *Counterclaim*, Barron's Law Dictionary 106 (3d ed. 1991)
- Ex. 2005 *Counterclaim*, People's Law Dictionary 118 (2002)
- Ex. 2006 *Counterclaim*, Black's Law Dictionary 376 (8th ed. 2004)
- Ex. 2007 157 Cong. Rec. S1375 (daily ed. Mar. 8, 2011)
- Ex. 2008 153 Cong. Rec. E774 (daily ed. Apr. 18, 2007)
- Ex. 2009 H.R. Rep. 112-98 (June 1, 2011)
- Ex. 2010 Declaration of Dr. Rhett Drugge
- Ex. 2011 Curriculum Vitae of Dr. Rhett Drugge
- Ex. 2012 Definition of "specify," Dictionary.com,
<http://www.dictionary.com/browse/specify?s=t> (Dec. 26, 2017)
- Ex. 2013 *Predetermined*, Webster's New College Dictionary 891(3d ed. 2008)
- Ex. 2014 *Predetermined*, Webster's Ninth New Collegiate Dictionary 926 (1990)
- Ex. 2015 *Receive*, Webster's Ninth New Collegiate Dictionary 982 (1990)
- Ex. 2016 *Heath v. Audatex N. Am., Inc.*, 2012 WL 177413 (E.D. Pa. 2012)
- Ex. 2017 *Baker v. Borg Warner Morse Tec, Inc.*, 2012 WL 195011 (S.D.W. Va. 2012)
- Ex. 2018 *Fujitsu, Ltd. v. Nanya Tech. Corp.*, 2007 WL 1660694 (N.D. Cal. 2007)

Pursuant to 37 C.F.R. § 42.107, Patent Owner Melanoscan LLC (“Melanoscan”) submits its Preliminary Response to Canfield Scientific, Inc.’s (“Canfield’s”) Corrected Petition, Paper No. 9 (“Petition” or “Pet.”) seeking *inter partes* review (“IPR”) of U.S. Patent No. 7,359,748 (“the ‘748 patent”), Case No. IPR2017-02125. This filing is timely under 35 U.S.C. § 313, 37 C.F.R. § 42.107, and in accordance with the Order of the Patent Trial and Appeal Board (“the Board”) entered November 21, 2017 (Paper No. 8).

I. INTRODUCTION.

In August 2016, Canfield filed a civil action in federal court (“the civil action”) against Melanoscan including claims for, *inter alia*, a declaratory judgment of non-infringement of the ‘748 patent. (Ex. 2001 ¶¶ 29-32). Melanoscan answered the complaint and included a compulsory counterclaim for infringement. (Ex. 2002, 9-14). Canfield, in turn, filed a “counterclaim in reply” seeking a declaratory judgment of invalidity of the patent. (Ex. 2003, 9-10). Nearly three months later, Canfield filed its Petition. As Canfield filed its invalidity claim prior to its Petition, the Petition is barred by 35 U.S.C. § 315(a), and the Board lacks jurisdiction to institute or conduct this IPR.

Alternatively, the Petition fails to show there is a reasonable likelihood that Canfield would prevail on any challenged claims. No claim is asserted to be

anticipated, only obvious. However, the challenged claims are not obvious, and Canfield would not prevail against any claim in an IPR.

Accordingly, the Board should deny *inter partes* review as to all grounds set forth in the Petition.

II. PETITIONER’S ALLEGED GROUNDS.

The Petition challenges claims 1-8, 11, 30, 32-34, 46 and 51 on the following grounds:

Ground 1: Claims 1-5, 8, 11, 30, 33-34, 46 and 51 are challenged under 35 U.S.C. § 103 as obvious over Voigt *et al.*, “Topodermatographic Image Analysis for Melanoma Screening and the Quantitative Assessment of Tumor Dimension Parameters of the Skin,” Cancer 75(4):981-988 (Feb. 15, 1995) (“Voigt”) and Hurley *et al.*, “Body Measurement System Using White Light Projected Patterns for Made-to-Measure Apparel,” SPIE Vol. 3131, 212-223 (July 7, 1997) (“Hurley”).

Ground 2: Claims 1-4, 8, 11, 30, 33-34 and 51 are challenged under 35 U.S.C. § 103 as obvious over Voigt and PCT publication no. WO 98/28908 (“Crampton”).¹

¹ In its summary chart (Pet., 2), Canfield lists claim 5 as a challenged claim under Ground 2. However, neither the Petition nor its expert Dr. Muller addresses claim 5 under this ground. Pet., 47-60. Thus, Canfield has not met its burden under 35 U.S.C. § 314, and Melanoscan need not further address this claim.

Ground 3: Claims 1-8, 11, 30, 33-34 and 46 are challenged under 35 U.S.C. § 103 as obvious over Hurley.²

Ground 4: Claims 6 and 7 are obvious over Voigt, Hurley and Daanen *et al.*, “Whole Body Scanners,” Displays 19, 111-120 (1998) (“Daanen”) under 35 U.S.C. § 103.

Ground 5: Claims 32 and 36 are obvious over Voigt, Crampton and PCT publication no. WO 99/56249 (“Dye”) under 35 U.S.C. § 103.

III. THE PETITION IS BARRED BY 35 U.S.C. 315(A) AND THE BOARD LACKS THE JURISDICTION AND AUTHORITY TO INSTITUTE OR CONDUCT THIS IPR.

Prior to filing its Petition, Canfield filed the civil action challenging the validity of the ‘748 patent by filing a declaratory judgment of patent invalidity. *See* Exs. 2001 ¶¶ 29-32; Ex. 2003, 9-10. The Petition is thus barred under 35 U.S.C. § 315(a)(1). The fact that Canfield calls its claim a “counterclaim” does not except it from the statutory bar. Canfield did not file a “counterclaim” under 35 U.S.C. § 315(a)(3). Rather, Canfield filed a “counterclaim in reply” to Melanoscan’s compulsory counterclaim for infringement. The law treats Canfield’s “counterclaim in reply” as an amendment to the complaint, and therefore Canfield has filed a civil action challenging the validity of the patent

² In its summary chart, Canfield lists claim 51 as a challenged claim under Ground 3. However, neither the Petition nor Dr. Muller addresses claim 51 under this ground. Pet., 60-75. Thus, Canfield has not met its burden, and Melanoscan need not further address this claim.

under section 315(a)(1). Canfield’s interpretation of the statute is contrary to Congress’ intent, and would lead to an absurd result allowing the exception of subsection 315(a)(3) to swallow the rule of section 315(a)(1).

A. Canfield’s “Counterclaim in Reply” Amended Its Civil Action to Challenge Validity of the Patent and Statutorily Bars the Petition.

Section 315(a)(1) reads as follows:

(a) Infringer’s Civil Action.—

(1) Inter partes review barred by civil action.—

An inter partes review may not be instituted if, **before the** date on which the **petition** for such a review **is filed**, the **petitioner** or real party in interest **filed a civil action challenging** the **validity of** a claim of the **patent**.

(emphasis added). There can be no dispute that Canfield is the plaintiff and “filed a civil action” within the meaning of section 315(a). A “civil action” simply refers to a claim in federal court instituted by filing a complaint. *See* Fed. R. Civ. P. 2 (“there is one form of action – the civil action”); Fed. R Civ. P. 3 (“A civil action is commenced by filing a complaint with the court”); *Hallstrom v. Tillamook Cty.*, 493 U.S. 20, 26 (1993) (stating same proposition).

There is also no dispute that Canfield “filed a civil action” containing a claim challenging the validity of the ‘748 patent prior to filing the Petition. It makes no difference that Canfield’s invalidity claim was not asserted at the time it filed its initial complaint. Nothing in the statute or the federal rules limits “a civil

action” to only the first pleading filed by the plaintiff.³ Canfield filed its counterclaim in reply seeking a declaratory judgment of invalidity almost three months prior to filing the Petition. Ex. 2003. Further, Canfield’s counterclaim in reply is treated as an amendment to its complaint. *See Century Pac., Inc. v. Hilton Hotels Corp.*, 528 F. Supp. 2d 206, 213 n. 3 (S.D.N.Y. 2007) (“a reply counterclaim is to be treated as a motion to amend the complaint under Rule 15(a)”); *Southeastern Indus. Tire Co., Inc., v. Duraprene Corp.*, 70 F.R.D. 585, 588 (E.D. Pa. 1976) (“counterclaim in reply [treated] as an amendment to the complaint”); *see also Heath v. Audatex N. Am., Inc.*, 2012 WL 177413, at *3 (E.D. Pa. 2012) (motion for leave to file counterclaim in reply treated as motion to amend complaint) (Ex. 2016); *Baker v. Borg Warner Morse Tec, Inc.*, 2012 WL 195011, at *3 (S.D.W. Va. 2012) (treating motion to file counterclaim in reply as motion to amend the complaint) (Ex. 2017); *Polymer Indus. Prod. Co. v. Bridgestone/Firestone, Inc.*, 211 F.R.D. 312, 315 n. 5 (N.D. Ohio 2002) (“a

³ It is black-letter law that a plaintiff’s amended complaint supplements or modifies the original complaint. *See, e.g., Rockwell Int’l Corp. v. Unites States*, 549 U.S. 457, 474 (2007) (relevant allegations included those in the amended complaint); *Boelens v. Redman Homes, Inc.*, 759 F.2d 504, 508 (5th Cir. 1985) (“we must look to the amended complaint”); *see also* Fed. R. Civ. P. 15(a) (relation back of amended pleading to the date of the original pleading). Canfield’s counterclaim in reply should be treated in the same way as if Canfield had amended its complaint under Fed. R. Civ. P. 15 to add its invalidity claim. No practical or logical distinction can be drawn between the two.

counterclaim to a counterclaim, or a counter-counterclaim, would be effected by simply amending the complaint”).

Canfield thus “filed a civil action challenging the validity of a claim of the patent,” and did so “before the date on which the petition [was] filed.” *See* 35 U.S.C. § 315(a)(1). The Petition is barred by 35 U.S.C. § 315(a)(1). The Board lacks jurisdiction to institute or conduct an IPR. *See id.*; *GTNX, Inc. v. Intra, Inc.*, CBM 2014-00072, Paper 20, at 4 (Dec. 10, 2014) (time limits are “a Congressional limitation on the Board’s jurisdiction”), *aff’d*, 789 F.3d 1309 (Fed. Cir. 2015).

Canfield asserts that its declaratory judgment of invalidity was a “counterclaim” in “response to an action for patent infringement,” and therefore its Petition falls within the “counterclaim” exception of 35 U.S.C. § 315(a)(3). Pet., 2. The Board should reject Canfield’s self-serving designation of its invalidity claim as a “counterclaim” and treat it for what it is – an amendment to Canfield’s complaint for declaratory relief. In addition, Canfield is incorrect that Melanoscan filed “an action for patent infringement.” Canfield filed the complaint and thus filed the civil action. *See* Fed. R. Civ. P. 3 (“A civil action is commenced by filing a complaint with the court”). Further, Canfield’s civil action challenged the validity of the ‘748 patent *before* its Petition was filed, and therefore falls squarely within the statutory bar of section 315(a)(1). Melanoscan, on the other hand, filed a compulsory counterclaim, which is not the filing of a civil action. *See* Fed. R.

Civ. P. 13(a)(1)(A) (a compulsory counterclaim arises out of the subject matter of an opposing party’s claim); *cf. Westwood Apex v. Contreras*, 644 F.3d 799, 805 (9th Cir. 2011) (distinguishing between original defendants and plaintiffs as “counterclaim defendant”).

Not only is Canfield’s argument belied by the plain language of the statute, but it would allow the exception of subsection 315(a)(3) to swallow the rule of section 315(a) and lead to absurd results. Under Canfield’s reading, an infringer could easily and routinely circumvent the statutory bar of section 315(a)(1) by presenting its invalidity challenge in a counterclaim in reply – which it would inevitably have an opportunity to file – rather than its initial complaint. Permitting Canfield’s scheme would proliferate artful pleading and create artificial distinctions between infringers based solely on the self-serving titles of their pleadings. This would frustrate Congress’ intent and permit a limited exception to swallow a rule.

B. Canfield’s Invalidity Claim Is Not a “Counterclaim” Within the Meaning of Subsection 315(a)(3).

1. Principles of Statutory Interpretation.

Unless otherwise defined, statutory terms are interpreted in accordance with “their ordinary, contemporary, common meaning.” *Perrin v. United States*, 444 U.S. 37, 42 (1979); *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1314-15 (Fed. Cir. 2005) (“ordinary, contemporary, common meaning” standard applies to

patent statute), *abrogated in part on unrelated grounds*, *Zoltek Corp. v. United States*, 672 F.3d 1309, 1319-21 (Fed. Cir. 2012) (*en banc*). To determine such meaning, courts rely on dictionaries, other evidence of usage contemporaneous with the statute’s enactment, and common sense. *See, e.g., Sandifer v. U.S. Steel Corp.*, 134 S. Ct. 870, 876-77 (2014) (adopting dictionary definitions); *BedRoc Ltd., LLC v. United States*, 541 U.S. 176, 184 (2004) (relying on “common sense” to determine the “most natural interpretation” of the statute).

Statutory language also must be interpreted based on “the language itself, the specific context in which that language is used, and the broader context of the statute as a whole.” *Robinson v. Shell Oil Co.*, 519 U.S. 337, 341 (1997). If the literal language of a statute is susceptible to multiple interpretations, it is appropriate to resolve such ambiguities on the basis of “the broader context provided by other sections of the statute.” *Id.* at 345 (relying on broader context to interpret “employee” as encompassing former employees); *see also Yates v. United States*, 135 S. Ct. 1074, 1082 (2015) (plurality opinion) (examples where Court held “identical language may convey varying content when used in different statutes”). Other interpretive tools include the purpose and legislative history of the statute. *Robinson* at 345-46 (resolving ambiguity so that construction was consistent with “primary purpose” of statute); *see also General Dynamics Land*

Sys. Inc. v. Cline, 540 U.S. 581, 600 (2004) (interpreting statute based on its “text, structure, purpose, and history”).

Further, a literal interpretation of a statute cannot stand when it would lead to a “patently absurd” consequence. *United States v. Brown*, 333 U.S. 18, 27 (1948). An absurd consequence would be one that produces different outcomes for parties who, in all relevant aspects, are similarly situated. *See, e.g., McNeill v. United States*, 563 U.S. 816, 823 (2011) (rejecting “absurd results” that would result if “two defendants who violated [a statute] on the same day and who had identical criminal histories ... should receive dramatically different federal sentences”); *Sharp Elecs. Corp. v. United States*, 124 F.3d 1447, 1449-50 (Fed. Cir. 1997) (rejecting statutory construction that would result in “illogical and inequitable” distinction between similarly-situated parties).

Similarly, an interpretation that would defy common sense and frustrate congressional intent must be discarded. *Brown*, 333 U.S. at 26 (“[t]he canon in favor of strict construction [of penal statutes] is not an inexorable command to override common sense and evident statutory purpose.”); *Sharp Elecs.*, 124 F.3d at 1450 (refusing “absurd” result “which would require us to attribute a foolish motive to Congress”). These principles have previously guided the Board to avoid an interpretation that failed to effect the statute’s purpose. *St. Jude Med., Cardiology Div., Inc. v. Volcano Corp.*, IPR 2013-000258, Paper 29 at 3-4 (Oct.

16, 2013) (rejecting construction of statutory bar of section 315(b) that would “frustrate Congressional intent”).

Each of these principles supports application of the section 315(a)(1) statutory bar to Canfield’s Petition.

2. The “Counterclaim” Exception of section 315(a)(3) Does Not Apply to Counterclaims in Reply.

a. The Ordinary, Contemporary Meaning of “Counterclaim” Is a Claim Made by Defendant Against Plaintiff, Not by Plaintiff Against Defendant, as Was Canfield’s Invalidity Challenge Here.

Unless otherwise defined, statutory terms are interpreted in accordance with their ordinary and contemporary meaning. *Perrin*, 444 U.S. at 42. Here, the ordinary meaning of “counterclaim” is a claim made by a defendant against a plaintiff. *See* Ex. 2004 (defining “counterclaim” as “a counter-demand made by **defendant** against the **plaintiff**”); Ex. 2005 (defining “counterclaim” as “a retaliatory claim by a *defendant* against a *plaintiff* in a lawsuit included in the defendant’s answer and intending to offset and/or reduce the amount of the plaintiff’s original claim against the defendant”) (emphasis added); Ex. 2006 (defining “counterclaim” as “a claim for relief asserted against an opposing party after an *original* claim has been made; esp. a *defendant’s* claim in opposition to or as a setoff against the *plaintiff’s* claim”) (emphasis added); *see also Sandifer*, 134 S. Ct. at 876-77 (adopting dictionary definitions). This comports with routine

pleading – a plaintiff brings a complaint, a defendant brings a counterclaim, and the plaintiff answers the counterclaim. *See* Fed. R. Civ. P. 7.

A counterclaim in reply, by contrast, is a claim made by a plaintiff against a defendant. Hence, a counterclaim in reply is treated as an amendment to the complaint. *See supra* at 5-6.⁴ Canfield’s counterclaim in reply for a declaration of patent invalidity was thus an amendment to Canfield’s claim for declaratory relief. In other words, Canfield’s counterclaim in reply expanded its initial claim for declaratory relief to include not only a claim for declaratory judgment of non-infringement, but also invalidity. *See* Ex. 2003, 9-10. Such claim brought by the plaintiff – a counterclaim to a counterclaim, or a “counterclaim in reply” – is not a “counterclaim” within the plain meaning of the term in subsection 315(a)(3).

b. The Legislative History and Statutory Structure Support the Ordinary Meaning of “Counterclaim” as a Claim Made By Defendant Against Plaintiff, Not by Plaintiff Against Defendant.

In hearings on the Senate version of the AIA, Senator Kyl explained the purpose and applicability of section 315(a):

⁴ The adoption of a different nomenclature for such pleading – “counterclaim-in-reply” – further reinforces that the plain and ordinary meaning of “counterclaim” does not encompass a counterclaim in reply. *See Polymer Indus. Prod. Co.*, 211 F.R.D. at 315 n. 5 (questioning accuracy of plaintiff referring to a counterclaim in reply as a “counterclaim”); *see also BP Am. Prod. Co. v. Burton*, 549 U.S. 84, 92-93 (2006) (different nomenclature compelled different meaning than statutory term).

Subsections (a) and (b) of sections 315 and 325 impose time limits and other restrictions when inter partes and post-grant review are sought in relation to litigation. **Sections 315(a) and 325(a) bar a party from seeking or maintaining such a review if he has sought a declaratory judgment that the patent is invalid. This restriction applies, of course, only if the review petitioner has filed the civil action. These two subsections (a) do not restrict the rights of an accused infringer who has been sued and is asserting invalidity in a counterclaim. That situation is governed by section 315(b),** which provides that if a party is sued for infringement, and wants to seek inter partes review, he must do so within 6 months of when he was served with the infringement complaint.⁵

(Emphasis added). Ex. 2007 (relevant section marked). Thus, Canfield’s Petition falls exactly into the situation described by Senator Kyl for when section 315(a)(1) applies. Canfield is the plaintiff that “filed the civil action” and challenged the validity of the patent prior to filing its Petition. *See id.* By contrast, Congress intended subsection 315(a)(3) only to protect a defendant or “accused infringer who has been sued and is asserting invalidity in a counterclaim.” *Id.*

The statutory structure of section 315(a) further demonstrates that section 315(a)(3) is concerned with a defendant’s claim against a plaintiff, not a plaintiff’s

⁵ In the enacted version of the bill, the six-month deadline was changed to one year. 35 U.S.C. § 315(a)(1).

claim against a defendant, as is Canfield’s invalidity claim here. *See General Dynamics Land Sys.*, 540 U.S. at 593, 600 (relying on statute’s “text, structure, purpose, and history”). Sections 315(a)(1), 315(a)(2), and 315(a)(3) address different circumstances depending upon whether an accused infringer or a patentee files the civil action. Sections 315(a)(1) and (a)(2) address the circumstances where an accused infringer “files a civil action”: (i) prior to filing its IPR petition (§ 315(a)(1)), and (ii) on or after the date of filing its IPR petition (§ 315(a)(2)). Section 315(a)(3), when read in context with Sections 315(a)(1) and (2), addresses the remaining situation where the patentee “files a civil action.” *See Robinson*, 519 U.S. at 341, 345 (must consider “the specific context in which that language is used, and the broader context,” both in “the statute as a whole” and as “provided by other sections of the statute”); *Jones v. United States*, 527 U.S. 373, 389 (1999) (“Statutory language must be read in context”). In the case of section 315(a)(3), the patentee is the plaintiff bringing the civil action alleging infringement, and the defendant is accused of infringement and files a counterclaim. That is not the situation here.

Thus, the statutory structure and the legislative history accord with the plain meaning of “counterclaim.” Congress intended subsection 315(a)(3) to address a defendant’s counterclaim against a plaintiff, not a plaintiff’s counterclaim in reply against a defendant.

c. Expanding the Interpretation of “Counterclaim” to Include a Counterclaim in Reply Would Frustrate Congress’s Intent and Lead to Absurd Results.

Construing “counterclaim” to include Canfield’s counterclaim in reply would render section 315(a)(1) meaningless and frustrate Congress’ intent that an infringer decide between (i) challenging validity in court or (ii) seeking an IPR, in order to avoid harassing the patentee. *See Clio USA, Inc. v. Procter & Gamble Co.*, IPR 2013-00438, Paper 9 at 8 (Jan. 9, 2014) (§ 315(a)(1) serves to prevent use of IPR “for harassment or delay”). Congress explicitly articulated these concerns in the context of a predecessor bill to the AIA:

Many have expressed concerns about the possibility of harassment of patent owners who want to assume quiet title over their invention. In an effort to address those concerns, ***the bill prohibits multiple bites at the apple by restricting the cancellation petitioner to opt for only one window one time.***

(emphasis added). Ex. 2008 (relevant portion marked). The House of Representatives Judiciary Committee similarly explicated the principles guiding section 315(a) and the other subsections of section 315:

The Committee recognizes the importance of quiet title to patent owners to ensure continued investment resources. While this amendment is intended to remove current disincentives to current administrative processes, the changes made by it **are not to be used as tools for harassment or a means to prevent**

market entry through repeated litigation and administrative attacks on the validity of a patent. Doing so would frustrate the purpose of the section as providing quick and cost effective alternatives to litigation.

(emphasis added). Ex. 2009; *see also St. Jude Med., Cardiology Div., Inc. v. Volcano Corp.*, IPR 2013-000258, Paper 29 at 3 (Oct. 16, 2013) (approvingly citing this passage).

Under Canfield’s interpretation, however, any accused infringer could skirt the prohibition of section 315(a) by, as Canfield attempts, filing a declaratory judgment of non-infringement against the patentee, waiting a mere twenty-one days for the patentee to file its compulsory counterclaim for infringement, then filing a counterclaim in reply seeking a declaratory judgment of invalidity, and thereafter filing an IPR. *See* Fed. R. Civ. P. 12(a) (setting twenty-one day period to respond to complaint); *Capo, Inc. v. Dioptics Med. Prods., Inc.*, 387 F.3d 1352, 1356 (Fed. Cir. 2004) (“In an action for declaration of noninfringement, a counterclaim for patent infringement is compulsory and if not made is deemed waived”). Congress did not intend to allow the statutory bar to turn on manipulative pleading, such as Canfield’s, or to allow such absurd results. *See Brown*, 333 U.S. at 26 (rejecting construction “that would lead to bizarre results” and where “[t]he congressional purpose would be frustrated”); *In re Ybarra*, 259 B.R. 706, 708 (S.D. Ill. 2007) (rejecting statutory interpretation that would

“inadvertently create an avenue of avoidance for clever debtors” who could manipulate pleadings).

Canfield’s scheme would permit different application of the statutory bar to infringers that are similarly situated. Consider three declaratory judgment plaintiffs for non-infringement against whom the patentee filed a compulsory counterclaim for infringement. The first brought an invalidity count in the complaint; the second, in an amended complaint; and the third, in a counterclaim in reply. All three accused infringers are plaintiffs, and all three brought invalidity claims prior to filing a petition for IPR. In all three scenarios, as in this case, the accused infringer chose to go to court, not the patentee. There is no logical reason why these three infringers should be treated any differently. Yet this is exactly the result advocated by Canfield. *See St Jude Med.*, Paper 29 at 3 (rejecting interpretation that “would lead to unjustified discrimination among otherwise similarly-situated accused infringers”); *Ybarra*, 359 B.R. at 707 (rejecting interpretation that would cause “illogical” differences in treatment of similarly situated parties, when there was “no explanation that would justify this disparate treatment”); *McNeill*, 563 U.S. at 823 (rejecting “absurd results” that would result from disparate treatment); *Sharp Elecs.*, 124 F.3d at 1450.

Furthermore, under Canfield’s interpretation, the statute could not be evenly applied, even to parties who attempted the same chicanery as Canfield. The

application of section 315(a)(3), according to Canfield, depends on that the pleading was denominated a “counterclaim.” Thus, the application of the statutory bar would turn on whether the district court allowed the claim challenging validity in a separate pleading from the complaint (avoiding the statutory bar per Canfield) or, required the infringer to file an amended complaint (triggering the statutory bar even under Canfield’s position). *See, e.g., Fujitsu Ltd. v. Nanya Tech. Corp.*, 2007 WL 1660694, at *2 (N.D. Cal. 2007) (striking plaintiff’s counterclaim in reply and directing it to file an amended complaint) (Ex. 2018). This would be an “absurd result.” *See, e.g., McNeill*, 563 U.S. at 822-23.

Canfield’s reliance on *Ariosa Diagnostics v. Isis Innovation Ltd.*, IPR2012-00022 (Pet., 2) is misplaced. *Ariosa* did not hold that a counterclaim in reply seeking declaratory judgment of invalidity avoids section 315(a)(1). Nor did *Ariosa* hold that such a counterclaim in reply falls within the exception of section 315(a)(3). In *Ariosa* there was no declaratory judgment of invalidity. *Ariosa* merely held that when a plaintiff infringer files a declaratory judgment of non-infringement and the patentee defendant counterclaims for infringement, the plaintiff may file an affirmative defense of invalidity to the infringement counterclaim without triggering the statutory bar. *See Ariosa*, Paper 20 at 5-7 (Feb. 12, 2013). In doing so, *Ariosa* expressly distinguished claims for invalidity and affirmative defenses of invalidity in answer to an infringement claim. *See id.*

at 6 (noting “fundamental difference” between the two). Whereas “[an] affirmative defense of invalidity is tied to the claim of infringement,” a claim of invalidity is independent from the claim of infringement. *See id.* *Ariosa* is not applicable to this case.

For the foregoing reasons, Canfield’s Petition is statutorily barred under section 315(a)(1), and the Board lacks jurisdiction to institute a petition. *GTNX*, Paper 20, at 4 (time limits are “a Congressional limitation on the Board’s jurisdiction”). The Board must deny institution. *Id.*

IV. THE CHALLENGED CLAIMS ARE NOT UNPATENTABLE.

A. Development of the Invention.

Melanomas and other skin cancers are some of the most prolific and deadly diseases in the U.S. Exs. 1001:25-50⁶; 2010 ¶ 12. In the decades prior to the year 2000, skin cancer rates in the U.S. had increased substantially. Exs. 1001 1:34-35; 2010 ¶¶ 14, 15. There are well over a million new skin cancer cases in the U.S. every year, with thousands of deaths. Exs. 1001 1:30-40; 2010 ¶¶ 12, 14. Early detection and diagnosis is critical for treatment, and hopefully, cure, of the cancer. Exs. 1001 1:30-32, 62-65, 3:24-25; 2010 ¶¶ 13, 15.

Prior to the invention of the ‘748 patent, examination for skin cancers and other skin diseases consisted primarily of visual inspection of the patient’s skin by

⁶ The ‘748 patent is cited by column:lines format.

a practitioner physician or other clinician. Exs. 1001 1:54-56, 2:27-30; 2010 ¶ 16. Photography was also utilized to photograph a patient's skin, both for current examination purposes and to record the patient's current condition. Exs. 1001 1:67-2:3, 2:39-60; 2010 ¶¶ 17, 18. A photographer typically would take one or more photographs of a portion or the entirety of the patient's skin surface. Exs. 1001 2:59-61; 2010 ¶ 17. These photographs could be used at later time to compare the patient's then-current condition to the previously-recorded condition. Exs. 1001 3:1-3; 2010 ¶ 19. Such comparison is important because a key indication of cancer is a change in a mole, lesion or other skin feature over time, e.g., size, shape, color, etc. Ex. 2010 ¶ 19; *see also* Ex. 1001 6:15-17.

Dr. Rhett Drugge, a practicing dermatologist and the inventor of the '748 patent, realized there were a number of limitations on the existing examination and imaging techniques for skin cancer detection and evaluation and that improvement was needed. Exs. 1001 1:51-53, 3:29-31; 2010 ¶ 15. For example, visual inspection was time-consuming, especially of a patient's whole body. Ex. 2010 ¶ 16. Taking photography of a patient, which could number over 30 during a session, was also time-consuming. Exs. 1001 1:51-53 (need for rapid screening), 2:59-61; 2010 ¶ 20. Dr. Drugge also recognized the need for repeatable imaging conditions to accurately assess whether a clinically significant change had occurred. 2010 ¶¶ 21-23; *see* Ex. 1001 6:6-18. The skin feature being imaged can

appear differently if imaged under different conditions, e.g., lighting, shadowing, angle relative to the camera, etc., even if the feature has not changed over time. Ex. 2010 ¶ 21; *see* Ex. 1001 6:6-10 (discussing poor lighting). Moreover, to assess changes in size, the image scale must be relatively consistent between images. Ex. 2010 ¶¶ 24-27; *see* Ex. 1001 6:6-10 (benefits of repeatability).

On that point, Dr. Drugge recognized that existing scaling techniques posed disadvantages. Ex. 2010 ¶¶ 29-30. Known techniques included incorporating a calibration device, such as an object or grid of known size and shape, into the image by interposing it between the camera and the patient's skin. *Id.*, ¶ 28. By comparing an imaged feature to the known dimensions of the calibration device, one could determine the size of the skin feature regardless of the scale of the image. *Id.*, ¶ 28. Dr. Drugge realized, though, that interposing the calibration device between patient and camera blocked portions of the skin, decreasing the diagnostic value of the image. *Id.*, ¶ 30.

To address the shortcomings of existing technology, Dr. Drugge developed the total immersion photography ("TIP") system. *Id.*, ¶ 32. The TIP includes an enclosure or other structure defining a specified imaging position. Exs. 1001 5:3-5, Abstract, Figures; 2010 ¶ 32. A plurality of imaging devices and light sources are mounted to or in the enclosure and each imaging device is located a predetermined distance relative to the specified imaging position. Exs. 1001 4:24-

46, 18:21-25, Abstract, Figures; 2010 ¶ 32. The imaging devices can substantially simultaneously image multiple portions, if not essentially all, of the patient, from multiple perspectives and angles, despite the fact that the human body has many and convoluted surfaces. Exs. 1001 1:7-10, 3:15-16, 4:24-46, 5:3-14; 2010 ¶ 32. The plurality of light sources can illuminate the patient to reduce shadowing and inconsistent lighting. Exs. 1001 4:47-56, 6:6-9, 20:60-62, Figures; 2010 ¶ 32. Thus, a patient standing at the imaging position is effectively immersed in the imaging devices and light sources so that multiple images of the patient can be taken at one time. Exs. 1001 1:7-10, 3:15-16, 4:24-46, 5:3-14; 2010 ¶ 33.

TIP addresses many deficiencies of the prior art. Exs. 1001 3:11-15, 6:6-10; 2010 ¶ 35. The structure and design allows substantially simultaneous imaging of the patient with the multiple imagers, which reduces time and inaccuracies due to patient movement between photographs. Exs. 1001 6:4-10, 17:33-35, 17:43-47, 17:62-65; 2010 ¶ 35. In addition, the multiple light sources and placement of a plurality of imagers at a predetermined distance to the specified imaging position provides repeatability over multiple imaging sessions. Exs. 1001 6:6-17; 2010 ¶¶ 36-37. In effect, the structure of the TIP defines a coordinate space, and a person or object within that coordinate space can be imaged and accurate and precise measurements made. Exs. 1001 4:39-40, 4:42-46, 6:21-22; 2010 ¶ 37. This is because, when the person is located within the coordinate space, e.g., at or near the

specified imaging position, the images are taken under consistent lighting conditions and of similar, if not essentially identical, scale. Exs. 1001 6:6-10; 2010 ¶ 37. The TIP thus provides reproducible, standardized, and automated image capture for precise and accurate measurements. Exs. 1001 3:15-18, 3:23-28, 6:6-10, 17:4-6; 2010 ¶ 38. This enables clinically-relevant evaluation of imaged features by comparing images taken over time, without, for example, the need for a calibration device and its disadvantages. Exs. 1001 6:15-17, 2010 ¶ 40.

The TIP has been a substantial advancement in improving patient health. Ex. 1001 3:11-15, 3:24-28; Ex. 2010 ¶¶ 41-42. For example, the TIP has detected the world's smallest melanoma. Ex. 2010 ¶ 41. Further, the rapid and early screening and detection of skin cancer it enables, so critical to treatment, has significantly improved patient outcomes Ex. 1001 1:51-53, 1:62-65, 3:11-15, 3:24-28; Ex. 2010 ¶ 41.

B. The '748 Patent.

The '748 patent was filed on July 26, 2000 and issued on April 15, 2008. The subject matter of the '748 patent is directed to, *inter alia*, the TIP system, e.g., as discussed and cited in Section IV.A. The claims are also directed to aspects of the TIP.

Canfield challenges claims 1-8, 11, 30, 32-34, 46 and 51. Pet., 2. Claims 1 and 51 are the patent's independent claims. Claim 1 is directed to, *inter alia*, an

enclosure configured to receive a person or portion thereof and defining a specified imaging position for placing the person or portion thereof for imaging; a plurality of light sources spaced relative to each other to illuminate the person or portion thereof; a plurality of imaging devices spaced relative to each other, each imaging device located a predetermined distance relative to the specified imaging position; wherein each imaging device defines respective coordinates and said respective predetermined distance relative to the specified imaging position, and defines a respective focal length and resolution information, allowing precise measurement of imaged features of the person or portion thereof located at the specified imaging position. Claim 51 is directed to similar aspects of the TIP, except that, for example, it recites first means rather than an enclosure, second means rather than a specified imaging position, imaging means instead of imaging devices, and illuminating means rather than light sources. The challenged dependent claims, which depend from claim 1, define further aspects of the claimed invention.

Relevant limitations of the challenged claims are discussed below.

C. The Level of Skill in the Art.

For the purposes of this Preliminary Response only, Melanoscan does not contest Canfield's contentions regarding the level or ordinary skill in the art that a person of ordinary skill in the art ("POSA") would possess. Melanoscan reserves

the right, should an IPR be instituted, to challenge Canfield's contentions, and to submit its own definition of a POSA and the level of ordinary skill in the art.

D. Claim Construction.

In an IPR, claim terms in an unexpired patent are interpreted according to their broadest reasonable interpretation in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *Office Patent Trial Practice Guide*, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012). Under this standard, a claim term is given its ordinary and customary meaning as it would be understood by one of ordinary skill in the art. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007); *TRW Auto. U.S., LLC v. Magna Elects., Inc.*, IPR2015-00949, Paper 7 at 9 (Sept. 17, 2015).

For purposes of this Preliminary Response, Melanoscan will only address claim construction issues material to arguments set forth herein. Melanoscan reserves the right to propose different constructions or constructions for additional terms should a proceeding be instituted.⁷

⁷ For any proposed claim construction in the Petition not addressed, Melanoscan's position is that a construction of those claim terms is not needed at this time because Canfield has failed to meet its burden to establish a reasonable likelihood that any of the challenged claims are invalid. Accordingly, Melanoscan does not accede to such proposed constructions and reserves the right to challenge such and/or propose constructions should an IPR be instituted.

1. “A specified imaging position”

“A specified imaging position” should be construed according to its ordinary and customary meaning. The ordinary and customary meaning of “specified” is set forth “specifically or definitively.” *See* Ex. 2012. Accordingly, the term means that the imaging position is a specific position.

This is consistent with the specification of the ‘748 patent. *See* MPEP § 2111.01(I), citing *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989). The specification states that the “subject patient or physiological area” can be placed into the “specified position for imaging,” and illustrated embodiments include center points 108, 308 of the enclosure at which the person or portion can be placed for imaging. Ex. 1001 5:3-5; 18:36-44; 19:43-48; 20:37-44; FIGS. 1, 3, 5.

2. “Second means . . . for specifying an imaging position”

“Second means . . . for specifying an imaging position,” similarly to “a specified imaging position,” should be construed according to its ordinary and customary meaning in conjunction with 35 U.S.C. § 112 ¶ 6. Accordingly, the term should be construed as covering the structure and/or materials disclosed in the specification that specify a specific position as an imaging position and equivalents thereof. *See id.* Corresponding structure and/or materials in the specification include center points 108, 308 discussed above. *E.g.*, Ex. 1001 5:3-5; 18:36-44;

19:43-48; 20:37-44; FIGS. 1, 3, 5. The term thus covers such center points and equivalents thereof. *See* 35 U.S.C. § 112 ¶ 6.

Canfield's proposed construction that the second means is a shield positioned in such proximity to the person being imaged that the person is physically confined to the center of the enclosure is incorrect. Nothing in the '748 patent suggests that the shield has such a function, or as Dr. Muller opines, "the person can only stand at the specified imaging position." Muller Decl. ¶ 55. The Petition itself quotes the passage stating the actual function of the shield: it "protects the imager array 102." Pet., 10; Ex. 1001 18:65.

The Petition (and Dr. Muller) rely on and quote language that contradicts their construction: the system is sized "such that the person could easily stand at the center 108 of the device." Ex. 1001 18:36-39. "Could" plainly means that the person may stand at the center, not "must" stand at the center. Further, stating that the person may easily stand at the center indicates that the system is large enough so that that person is not confined to or must stand at the center. Canfield also relies on Fig. 1, but no dimensions are provided from which Canfield could base its conclusion. *See Nystrom v. Trex Co.*, 424 F.3d 1136, 1149 (Fed. Cir. 2002) (dimensions cannot be extracted from patent drawings if no quantitative values are provided).

The Board should disregard Canfield's proposed construction.

3. “Predetermined distance relative to the specified imaging position” and “predetermined distance relative to the second means”

“Predetermined distance relative to the specified imaging position” and “predetermined distance relative to the second means” should be construed according to their ordinary and customary meanings. The ordinary and customary meaning of “predetermined” is “established in advance or beforehand.” *See* Exs. 2013, 2014. Accordingly, “predetermined distance relative to the specified imaging position” means that the distance relative to the specified imaging position is established in advance, and “predetermined distance relative to the second means” means that the distance relative to the second means is established in advance. This is consistent with the specification, which states that “[w]ith subject placement,” e.g., at the specified imaging position or second means, “the camera array ... distances are known in relation to the subject.” Ex. 1001 4:42-43. This is accomplished by establishing the distances between the cameras in the array and the specified imaging position or second means in advance. *See id.*

4. “Centerline”

“Centerline” should be construed according to its ordinary and customary meaning. That is, as plainly recited in the claims, which is directed to a device, the centerline is a structural feature of the “device” defined by the specified imaging position or the second means.

Dr. Muller and Canfield contend that a POSA would understand “centerline” to refer to a line dividing the imaged object through its center, a line dividing the body along one of two planes, either the frontal plane of the person’s body dividing the person from side to side or the sagittal plane dividing the person from front to back. Pet., 7. The proposed construction is incorrect. The claims make no mention of the imaged object⁸ or planes of the body with respect to “centerline,” much less that the specified imaging position or second means defines such feature(s) of the imaged object or body. Such would also be nonsensical, as the imaged object or body is not an element of the claimed device. How could the claimed device define a feature of something that is not part of the device?

Nor does the specification state or suggest that the specified imaging position/second means defines a “centerline” of the person or portion thereof. The portion relied on by Dr. Muller and Canfield merely states that the system may be sized so that the “person could easily stand at the center 108 of the device.” Ex. 1001 18:36-39. By its plain wording, the passage relates to the size of the device and where the person may stand, not that the center 108 defines any feature of the person. *See id.* Indeed, the passage explicitly refers to “the center 108 of the device 100” not of a person or portion thereof. *Id.* (emphasis added).

⁸ The challenged claims do not recite “imaged object.” Rather, they recite “person or portion thereof.”

Further, Dr. Muller’s opinion that “centerline” would have Canfield’s proposed meaning in “photogrammetry” is unsupported by any evidence. *See* Muller Decl. ¶ 46. Moreover, it is improperly divorced from the wording of the claims and the specification. *See Philips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (“It is a bedrock principle of patent law that the claims of a patent define the invention . . .” and the specification “is the single best guide to the meaning of a disputed term”) (internal quotations omitted).

Canfield’s proposed construction has no basis in and is inconsistent with the claim language and the specification. *See ERBE Elektromedizin GmbH v. Int’l Trade Comm’n*, 566 F.3d 1028, 1034-37 (Fed. Cir. 2009) (it is incorrect to construe a claim inconsistently with the claim language and specification); *Zletz*, 893 F.2d at 321. The Board should not adopt it.

5. “First means for receiving and enclosing a person or portion thereof”

This term should be construed according to its ordinary and customary meaning in conjunction with 35 U.S.C. § 112 ¶ 6. Consequently, the term should be construed as covering the structure and/or materials disclosed in the specification that perform the separately-recited functions of “receiving” and “enclosing,” and equivalents thereof. *See id.* The panels of the embodiment of FIG. 1 relied on by Canfield do constitute part of the corresponding structure/materials of the first means. *See id.* However, Canfield’s contention that

the “first means” must “fully surround” the person is incorrect. The patent nowhere states that the person is or must be “fully” surrounded.

Canfield and Dr. Muller also disregard the separate function of the first means “for receiving” a person or portion thereof, not just “for enclosing.” The person or portion must be able to enter into the first means. *See* Ex. 1001 19:5-8, 20:9-13; 21:14-16 (discussing access and egress to the interior); Ex. 2015 (“receive” means “to permit to enter; admit”). The specification discloses that a doorway *may* be used to accomplish this function. *E.g.*, Ex. 1001 19:5-8, 20:9-13; 21:14-16 (a system without a doorway is also contemplated). Thus, the first means should also be construed to include an optional doorway and equivalents thereof. *See* 35 U.S.C. § 112 ¶ 6.

6. The Wherein Clause

Claims 1 and 51 recite

“wherein each . . . [imaging device/means] defines respective coordinates and said respective predetermined distance relative to the [specified imaging position/second means], and defines a respective focal length and resolution information, allowing precise measurement of imaged features of the person or portion thereof located at the [specified imaging position/second means].

This clause should be construed to mean that the imaging devices/means each define respective coordinates, respective predetermined distance, focal length,

and resolution as recited that allow precise measurement of the imaged features. That is, these characteristics of the imaging devices/means are defined in a manner that allows the claimed precise measurements. This is consistent with the specification, which stated that these characteristics “allow[] for the precise measurement of the human features of interest.” Ex. 1001 4:42-46.

In contrast, Canfield’s proposed construction that the device “precisely measures” the features “using” the predetermined distance, coordinates, focal length and resolution is incorrect. First, there is no limitation in the claims that the claimed device actually performs any measuring as Canfield contends. By its plain wording, the claims recite structure and characteristics of the imaging devices/means that **allow** precise measurement. This merely means that measurements can be made, not that they are made or that the claims are limited to devices that make measurements. Canfield attempts to inject into the claims a limitation that simply is not present.

As for Canfield’s contention that any measurements “use” the characteristics of the imaging devices/means, what Canfield really means, though not discussed in the Petition’s claim construction section, is that the claims are limited to inputting the distance, focal length and resolution information into equations or algorithms that calculate the desired measurement. *See, e.g.*, Pet., 13-16, 33, 64-66. This contention lacks any basis, as the ‘748 patent makes no statement or even

suggestion that measurements are limited to being performed in such manner. Canfield cites no portion of the patent that does.

Instead, Canfield relies on a single, misquoted sentence in the prosecution history, which states that the prior art “does not describe a system that allows precise measurement of imaged features based on the coordinates and predetermined distance of each imaging device relative to the imaging position.” Ex. 1002, 278. That statement does not say that the distance, focal length, distance or resolution information is “used” to make measurements or input into an equation or algorithm. It merely parallels what is in the claim and specification – that these characteristics allow precise measurements to be made. It certainly does not rise to level of “clear and unmistakable” disavowal necessary for prosecution disclaimer to attach. *See Avid Tech., Inc. v. Harmonic, Inc.*, 812 F.3d 1040, 1045 (Fed. Cir. 2016).

The context of the statement makes this clear. *See Mass. Inst. of Tech. v. Shire Pharm.*, 839 F.3d 1111, 1121-22 (Fed. Cir. 2016) (prosecution statements must be read in context). The statement was made discussing the Li reference cited against the claims. Ex. 1002, 277-78. Li has a moving camera array. *Id.*, 278. Because the Li camera array moves, it “does not describe a plurality of imaging devices located at a predetermined distance relative to a specific imaging position.” *Id.* The statement merely made the obvious and logical observation that

Li was thus structurally dissimilar to the claimed system wherein, *inter alia*, each imaging device defines the recited coordinates and distance relative to the imaging position, and such system with those features “allows precise measurement of imaged features.” *Id.* In context, there was no “clear and unmistakable” disavowal, much less the type and extent Canfield claims. *See Mass. Inst. of Tech.*, 839 F.3d at 1121-22; *Avid Tech.*, 812 F.3d at 1045.

The Board should thus reject Canfield’s proposed construction.

E. Claims 1-5, 8, 11, 30, 33-34, 46 and 51 Are Not Obvious over Voigt and Hurley.

To establish obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *See CFMT, Inc. v. Yieldup Int’l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (“no combination of the prior art, even if supported by a motivation to combine, would disclose all the limitations of the claims”); *In re Royka*, 490 F.2d 981, 985 (C.C.P.A. 1974) (obviousness requires a suggestion of all limitations in a claim). A patent claim composed of several elements, however, “is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007). Thus, “it can be important to identify a reason that would have prompted a person one of skill in the relevant field to combine the elements in the way the claimed new invention does.” *Id.* Accordingly, it is “[Petitioner]’s burden to demonstrate both ‘that a skilled artisan would have been

motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.’” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367-68 (Fed. Cir. 2016) (internal citations omitted).

The combination of Voigt and Hurley fails to render claims 1-5, 8, 11, 30, 33-34, 46 and 51 of the ‘748 patent obvious for the reasons discussed below. The Board should find that Canfield’s proposed Ground 1 lacks a reasonable likelihood of invalidating any challenged claims of the ‘748 patent.

1. Summary of Voigt

Voigt is directed to an imaging system for measuring and detecting changes in melanoma skin lesions. Ex. 1003, 981.

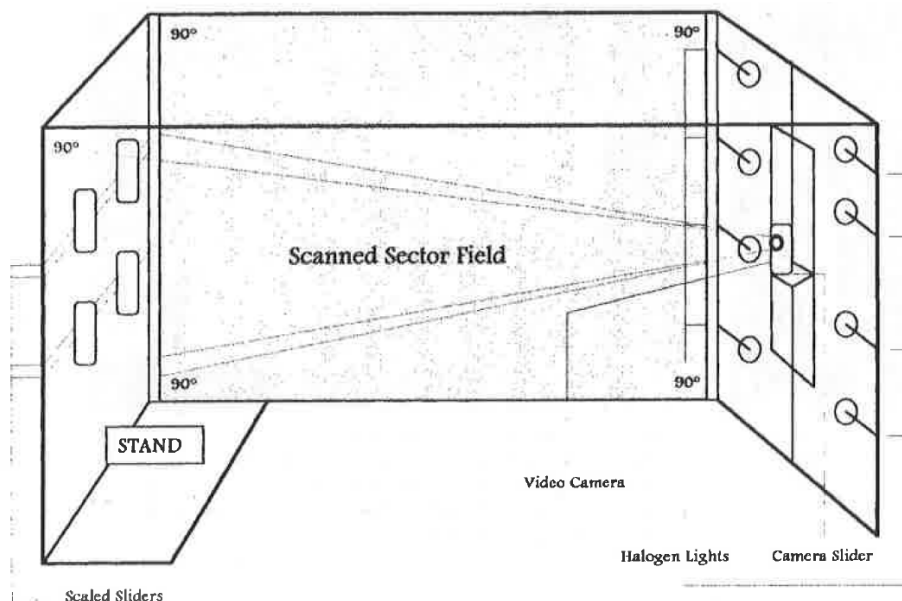


Figure 1. Topodermatographic position framework (schematic). Patient's median standing level (left), median video camera/bilateral lighting level (right), and scanned sector field (middle) between camera and preset skin-surface area.

For imaging, the patient is positioned within a position framework on a wall. *Id.*, 982, FIG. 1 (left side). A single video camera is located on an opposite wall *Id.* (right side). The camera is mounted on a vertical slider at the centerline of the device, which is adjusted to a required vertical height for each patient. *Id.* After positioning the patient and sliding camera, the camera takes an image of the patient, which is used to measure the lesion. *Id.*, 982-83. At a later date, the patient is placed at the same position in the position framework, the sliding camera is set to the previous position, the patient is again imaged with the camera, and the resulting image is used to measure the lesion again. *Id.*

The key feature of Voigt is the reproducibility of the positioning of the patient and sliding camera. *Id.*, 981-82, 986-87 (“reproducibility of positioning ... has been a major technical obstacle”). To “solve the reproducibility problem,” Voigt has a position framework that precisely fixes the patient’s position using horizontal sliders attached to the rear wall of the device. *Id.*, 982, 987, FIG. 1. The positions of the horizontal sliders and the vertical position of the sliding camera are recorded, and *identically* re-adjusted during later imaging. *Id.* Thus, the position framework with its horizontal sliders, the vertical adjustability of the camera, and the recording of those settings and replication thereof, are critical to reproducibility and accurate measurement. *Id.*, 981-82, 986-87.

Voigt recognizes the problem of reproducibility but addresses it in very different manner than the '748 patent. Voigt uses a rear wall with a position framework and sliders that precisely position the patient (and posture), and adjusting the camera height for the patient. The positions of the sliders and cameras must be recorded and then identically set the next imaging time.

The claimed invention of the '748 patent solves the problem by, using claim 1 as an example, using a plurality of imaging devices vertically and laterally spaced from each other on opposite sides of a centerline from each other, where the imaging devices are each located a predetermined distance relative to a specified imaging position and defines respective coordinate and said respective predetermined distance relative to the specified imaging position. This creates a coordinate space that allows precise measurements of people or objects located in the space. Ex. 2010 ¶¶ 32-38. In this manner, reproducibility is achieved without having to tightly position a patient with sliders against a wall, adjusting the vertical height of the camera, recording the positions of the sliders and camera, and identically readjusting their positions for subsequent imaging.

2. Summary of Hurley

Hurley's goal is to create a system for body measurements for made-to-measure apparel. Ex. 1004, 212.

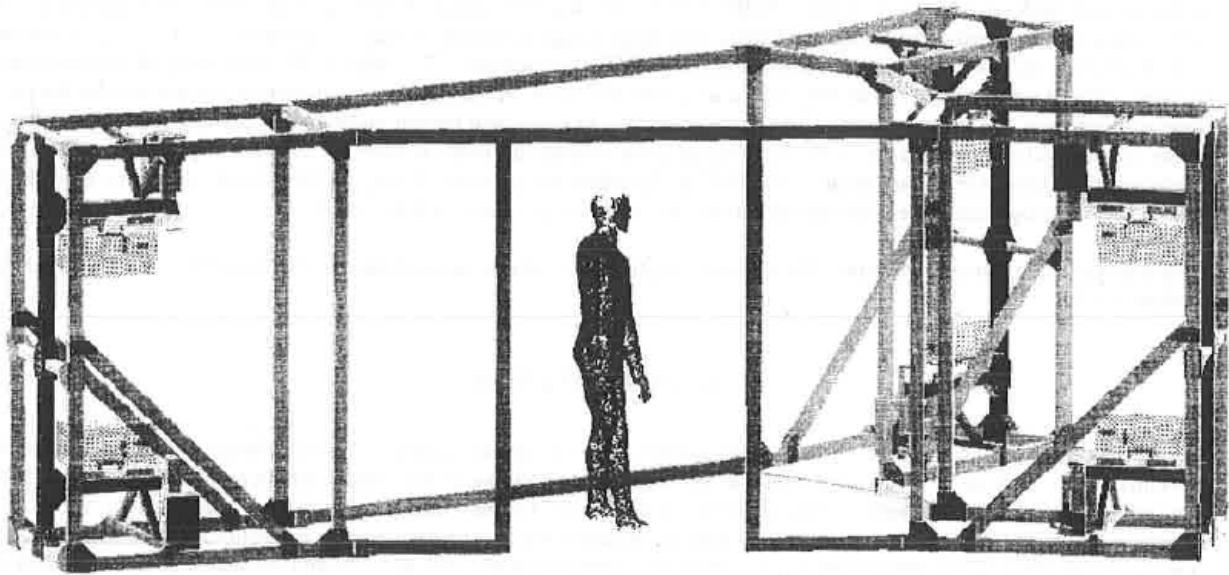


Figure 2.1 Overview of Body Measurement System for made-to-measure apparel.

The system uses three sets of two sensors mounted on a structure, each set mounted at a different viewing angle relative to a person standing within the device. *Id.*, 212-13; Fig. 2.1. When a person stands in the device, projectors sequentially partially illuminate the person with different light grating patterns. *Id.*, 212-14; Figs. 2.1, 2.2. The sensors each image a portion of the person, and the system generates an external outline of the person from the data sets. *Id.*, 212-14; Figs. 2.1, 2.2, 5.1, 5.2.

In Hurley, unlike Voigt, the person stands at no particular position in the device. *See id.*, FIG. 2.1. For this reason, Hurley places a calibration object approximately where the subject will stand in order to “assure correct coverage” and that the subject will be within the sensor depth of focus. *Id.*, 221.

While Hurley's goal is to allow measurement for made to measure apparel, it is unknown whether Hurley achieves that. According to Hurley, the system was only "under development," and the authors were still working on extracting measurements from the data sets. *Id.*, 212, 223. That is, Hurley admits they do not know whether the system works. A POSA would thus recognize that Hurley expressly teaches that it was unknown whether the disclosed system provides accurate body measurements, even for clothing.

3. The Proposed Combination of Voigt and Hurley Does Not Teach or Provide the Invention.

Canfield's contention that a combination of Voigt and Hurley would provide the invention is incorrect. Both Voigt and Hurley are missing multiple limitations of claims 1 and 51, and the combination would not provide the invention.

As Canfield admits, Voigt lacks a plurality of imaging devices/means. It also lacks any imaging device/means located a predetermined distance relative to the specified imaging position/second means. As discussed above, the Voigt camera is moveable. Due to this, the distance between the camera and the position framework is variable, and thus there is no predetermined distance of the camera relative to the position framework, i.e., a distance established in advance. *See supra*, Section IV.D.3.

Hurley also lacks an imaging device/means located a predetermined distance relative to a specified imaging position/second means. As discussed above, there

is no particular or specific location at which the person stands within the Hurley device. Accordingly, there is no “specified imaging position” in Hurley. As can be seen in Hurley’s FIG 2.1, the “framework,” i.e., the alleged “enclosure,” does not define any specified imaging position. Ex. 1004, 213. Likewise, there is no “second means” in Hurley that specifies a specific position as an imaging position. As Hurley lacks a specified imaging position or a second means as claimed, it cannot have imaging devices/means located a predetermined distance relative to a specified imaging position/second means.

Canfield’s contention that Hurley teaches a specified imaging position (Pet., 61) is incorrect. Canfield relies on Hurley’s calibration procedure. *Id.* All Hurley teaches, though, is that the person will stand somewhere in the system, and calibration will be performed for that location. *See* Ex. 2004, 221. The fallacy in Canfield’s position is that the claimed invention does not simply require that the person stand at some position that is selected before the person stands there. The claims require that the enclosure defines the specified imaging position. A position selected by a person using the imaging system, even in advance, is not defined by the enclosure as claimed.

Further, the use of a calibration object demonstrates that there is not a specified imaging position and predetermined distances and coordinates as claimed. If Hurley had a specified imaging position with predetermined distances

and coordinates as claimed, there would be no need for calibration, because when a person stands at the imaging position, this, in combination with the cameras defining predetermined distances and coordinates, obviates the need for any calibration object. *See supra*, Section IV.A. As Hurley lacks this, it relies on old technology of using a calibration object to enable (allegedly) accurate measurements.

As neither Voigt nor Hurley teach or suggest the claimed imaging device/means “located a predetermined distance . . .” as claimed, the combination cannot provide the limitations missing from both references. *See CFMT*, 349 F.3d at 1342 (invention not obviousness where combination fails to teach a claim element).

In addition, Canfield’s argument is essentially that a POSA combining Voigt and Hurley would simply add more cameras to the Voigt device. This is incorrect. Combining Hurley with Voigt would also change Voigt as follows:

- Relocating the camera from the centerline
- Fixing the position of the vertically sliding camera
- Removing the rear wall to image the rear of the person with a rear camera (the wall would otherwise block the rear camera)
- Removing the patient position framework and the horizontal sliders (at least because the rear wall is removed).

However, removing the rear wall, the position framework, and horizontal sliders would remove Voigt's critical patient positioning system and cause Voigt to no longer have an (alleged) "specified imaging position."

The above are substantial changes to Voigt that were not taught, suggested or otherwise obvious at the time of the invention. Canfield has not provided adequate reasons or rationales for the breadth of these changes to Voigt. *See KSR*, 550 U.S. at 418 (reason with "rational underpinning" must be identified (citation omitted)). Canfield's sole focus on adding more cameras to Voigt represents improper hindsight in which it used the claims as a template and guide and then selectively chose certain features of Hurley, but not others, with which to modify Voigt. *See In re NTP Inc.*, 654 F.3d 1279, 1298 (Fed. Cir. 2011) ("Care must be taken to avoid hindsight reconstruction by using 'the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims.'") (citations omitted); *Metalcraft of Mayville, Inc. v. Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017) ("we cannot allow hindsight bias to be the thread that stitches together prior art patches into something that is the claimed invention"); *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992) ("It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the

claimed invention is rendered obvious”); *see also KSR*, 550 U.S. at 421 (cautioning against hindsight).

Moreover, as discussed below, a POSA would not make such changes to Voigt.

4. Voigt Teaches Away from the Invention

As discussed above, Voigt instructs to use a moving camera to properly image the patient and provide reproducibility in later imaging. Voigt thus teaches away from imaging devices/means located a predetermined distance from a specified imaging position as in the invention, and a POSA would not modify Voigt to use “fixed” cameras as Canfield alleges. *See In re Grasselli*, 713 F.3d 731, 743 (Fed. Cir. 1983) (invention is not obvious when prior art teaches away from invention).

5. The Proposed Combination Would Render Voigt Inoperable for Its Intended Purpose.

Modifying Voigt in view of Hurley would improperly render Voigt inoperable or unsatisfactory for its intended purpose because it would remove Voigt’s rear wall with its patient position framework and horizontal sliders in order to image the patient’s “rear” with a rear camera. *See* MPEP § 2143.01(V) (citing *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984)). As discussed above, this structure is critical in Voigt to provide the needed reproducibility for monitoring and

measuring melanomas. The combination of Voigt and Hurley would not function as needed, and thus a POSA would not make the alleged combination. *See id.*

6. There Was No Reasonable Expectation of Success

Regardless that Canfield's proposed modification would, in fact, improperly render Voigt inoperable, a POSA would have no reasonable expectation of success for the modification. *Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1335 (Fed. Cir. 2013) (obviousness based on modification of prior art requires reasonable expectation of success). In view of Voigt's expressly-stated criticality of the rear wall, position framework, horizontal sliders, and vertically movable camera, a POSA would understand that a system without these structures would not work for melanoma screening and tracking. The required reproducibility could not be achieved. Thus, one of ordinary skill would not make the proposed modifications. *See id.*

That Hurley "operates" without these structures is inconsequential. First, as demonstrated above, Hurley itself acknowledges that it is unknown whether the system can provide accurate measurements, even for clothing. In view of Hurley's own uncertainty, a POSA would not believe that Hurley works, much less would work with respect to Voigt.

Moreover, despite Canfield's contention that Voigt and Hurley are similar, they are not. Voigt is directed to evaluating melanomas, which involves

millimeter-scale measurements. Ex. 1003, 981, 984. Reproducibility during subsequent measurements is crucial. *Id.*, 981-82, 986-87. In contrast, Hurley involves none of these concerns. Hurley seeks to provide measurements for clothing, not millimeter-scale measurements. Nor is Hurley concerned with reproducibility over time, but only one-time measurements for clothing. In view of this dissimilarity and the precise measurements requirements of Voigt, even if Hurley worked for clothing measurements, a POSA could have no reasonable expectation of success that Hurley would work with Voigt for measuring and tracking melanomas. *See Broadcom*, 732 F.3d at 1325 (no reasonable expectation of success in view of differences in prior art).

This is so even if Hurley has a “specified imaging position” as Canfield contends. Again, Voigt teaches that very precise, repeatable positioning of the patient is required. Axial and transversal spinal flexion must be prevented. Ex. 1003, 982, 987. To this end, Voigt *fixes* the patient position “at the thoracic and iliac level” by fitting the patient’s trunk into the horizontal sliders. *Id.* Even if in Hurley the person stands at a particular location, Hurley has no structure for fixing the person’s thoracic and iliac regions, and unacceptable axial and transversal spinal flexion will likely occur. *See* Ex. 1004, FIG 2.1. A POSA would therefore still have no reason to believe Canfield’s proposed modifications would work with Voigt.

7. The Proposed Combination Would Improperly Change the Principle of Operation of Voigt.

Voigt operates upon the principle of precisely positioning the patient against the rear wall using a position framework with horizontal sliders, adjusting the vertical position of the camera, recording the positions of the sliders and the camera, and identically adjusting them during future imaging. Removing these structures (e.g., in order to image the “back” of the person with a “rear” camera) would obviously require operation in a different manner, e.g., “to assure correct coverage,” for which Hurley uses calibration objects. Ex. 1004, 221. Thus, the proposed combination would utilize, and would need to utilize, a different principle of operation than Voigt. In view of this, a POSA would not modify Voigt as Canfield contends. *See* MPEP § 2143.01(VI) (citing *In re Ratti*, 270 F.2d 810, 813 (C.C.P.A. 1959)).

For at least the reasons above, challenged independent claims 1 and 51, and claims 5, 8, 11, 30, 33-34 and 46 dependent thereon, are not obvious over Voigt and Hurley. *See In re Fine*, 837 F.2d 1071, 1076 (Fed. Cir. 1988) (dependent claims are nonobvious if their independent claims are nonobvious).

F. Claims 1-4, 8, 11, 30, 33-34 and 51 Are Not Obvious over Voigt And Crampton.

The combination of Voigt and Crampton fails to render claims 1-4, 8, 11, 30, 33-34 and 51 of the ‘748 patent obvious for the reasons discussed below. The

Board should find that Canfield's proposed Ground 2 lacks a reasonable likelihood of invalidating any challenged claims of the '748 patent.

1. Summary of Crampton

Crampton is directed to kiosks that use cameras to image a person and create an avatar of that person. Ex. 1006, 1, 4. Sensors capture data points regarding the external surface of the person, and from the data points, a computer generates an avatar. *Id.*, 1, 3-4, 7-8. That is, Crampton does not create an actual image of the person, but merely creates a graphical representation of the silhouette or outer surface of the person in the form of a "closed, texture mapped, 3D polygonal mesh Avatar." *Id.*, 8.

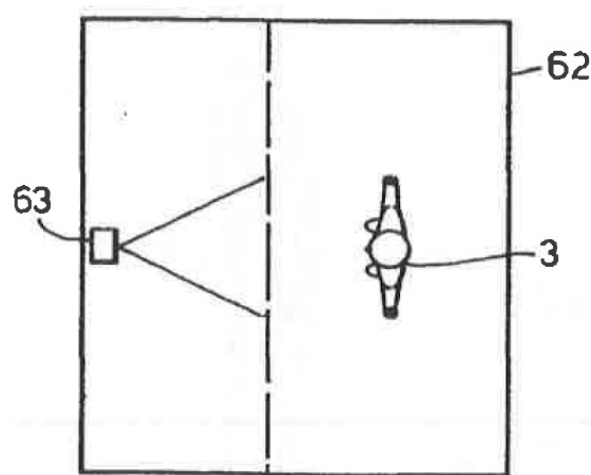
Crampton discloses two embodiments. Embodiment 1 (Figures 1-6) uses "laser stripe" data capture. *Id.*, 7. Sensors 57 are located on moveable linear axes 50a, 50b that are driven by a motor. *Id.*, 7, 8, FIGS. 4-6. The sensors 57 each contain lasers 55 that each generate a laser stripe 51, 52 and cameras 53, 54. During scanning, laser stripes 51, 52 are sequentially projected upon the person as the sensors 57 are moved along the axes 50a, 50b. *Id.* The cameras 53, 54 sequentially capture an image of each stripe on the person as the sensors move. *Id.* The resulting data set is then converted into an avatar. *Id.*, 8-9.

Embodiment 2 (Figs. 7-11) uses lighting generators such as LEDs 70, 71 instead of laser stripes. *Id.*, 10, 13; FIG. 10. One or more cameras 63 is used to

capture images of the person, and the captured data is used to generate the avatar.

Id. Crampton does not indicate whether the camera(s) 63 and LEDs 70, 71 are moved during scanning or not. However, in view of that the sensors 57 of Embodiment 1 are moved during scanning, a POSA would understand that the cameras and LED move in Embodiment 2 also.

An important concern to Crampton is the size, cost and complexity of the kiosks. To this end, Crampton teaches in several places that it is preferable to use as few cameras as possible with as low resolution as possible. *Id.*, 9-10. The preferred embodiment is thus a kiosk 62 with a camera on only one side of the person.



Id., 13; FIG. 7.

2. The Proposed Combination of Voigt and Crampton Embodiment 1 Does Not Teach or Provide the Invention.

Canfield contends that Voigt contains all the limitations of the independent claims except for a plurality of imagers/imaging means as specified in claims 1 and

51. Canfield contends that this is disclosed in Crampton, and it would be obvious to incorporate multiple cameras as in Crampton into the Voigt device for the same reasons given for combining Hurley with Voigt. Canfield is incorrect.

As discussed above, Voigt teaches a moving camera, and thus lacks an imaging device/means located a predetermined distance relative to a specified imaging position/second means, and defining respective coordinates and said respective predetermined distance relative to the specified imaging position, as claimed. Embodiment 1 of Crampton also has moving cameras. It too lacks the claimed imaging device/means located a predetermined distance relative to a specified imaging position/second means, and defining respective coordinates and said respective predetermined distance relative to the specified imaging position. The combination of Voigt and Embodiment 1, i.e., even incorporating the multiple cameras of Crampton into Voigt, would likewise have movable cameras, and still lack the above-discussed limitations of the claims. The claims cannot be obvious over Voigt and Embodiment 1. *See CFMT*, 349 F.3d at 1342.

3. The Claims Are Not Obvious in View of Voigt and Crampton Embodiment 2.

As discussed above, a POSA would understand that the camera(s) 63 in Embodiment 2 move as they do in Embodiment 1. Moreover, Crampton's silence on the issue means that Embodiment 2 cannot, under the law, be considered to have non-moving cameras. *See In re Robertson*, 169 F.3d 743, 745 (Fed. Cir.

1999) (in order for a feature to be inherent in the prior art, it must necessarily be present; the fact that it may possibly be present, even probably present, is insufficient). There is no reason the camera(s) in Embodiment 2 *must* be in a fixed position. *See id.* As with Embodiment 1, then, the proposed combination would contain moving cameras and fail to provide a system with all the limitations of claims 1 and 51. The claims are thus not obvious. *See CFMT*, 349 F.3d at 1342.

Even if the cameras were fixed in place, the claims are not obvious. First, as discussed in Section IV.E.4, Voigt instructs to use a moving camera to properly image the patient and provide reproducibility in later imaging. Voigt thus teaches away from using imaging devices/means located a predetermined distance from a specified imaging position. *See In re Grasselli*, 713 F.3d at 743 (claims not obvious when prior art teaches away). In addition, as discussed in Section IV.E.7, modifying Voigt so that it no longer would have a moveable camera would impermissibly change the principle of operation of Voigt. *See* MPEP § 2143.01(VI); *In re Ratti*, 270 F.2d at 813. A POSA would thus not make such changes. *See id.*

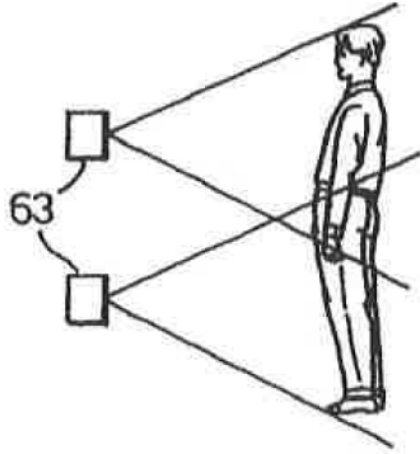
Further, claims 1 and 51 require that a plurality of the imaging devices/means are vertically spaced relative to each other, that a plurality of the imaging devices/means are laterally spaced relative to each other, and that a plurality of the imaging devices/means are located on opposite sides of the

centerline relative to each other. The only kiosk of Embodiment 2 that Canfield could possibly assert meets these limitations is the kiosk in FIG. 9 that shows four cameras. However, the prior art teaches away from modifying Voigt to have four cameras.

As discussed above, Voigt images skin lesions and melanomas using a single camera. There is no teaching or suggestion in the prior art that Voigt is deficient in any manner so that one of ordinary skill in the art would seek to modify Voigt by adding additional cameras. Moreover, Crampton is not concerned with imaging or measuring skin lesions and melanomas, or even creating an actual image of the scanned person, but with creating a silhouette avatar of the person. In view of that difference, a POSA would have no reason to believe that adding additional cameras to Voigt's single camera would have any benefit for imaging and measuring melanomas, and would have no reason to modify Voigt. *See KSR*, 550 U.S. at 418 (a POSA must have an adequate reason to modify the prior art); *Hynix Semiconductor Inc. v. Rambus Inc.*, 645 F.3d 1336, 1353 (Fed. Cir. 2011) (invention not obvious where "it was unclear whether the combination would be beneficial").

Canfield contends that a POSA would modify Voigt "in order to achieve the advantages of such total, multi-camera systems." Pet., 53. However, the kiosk at

issue only images one side of the person, just like in Voigt, and is not a “total body” system:



Ex. 1006, FIG. 9. Canfield’s purported rationale simply does not apply.

The lack of a reason to modify Voigt with additional cameras is buttressed by the cost and complexity of doing so. A POSA would not modify the prior art to make it more costly and complex, especially in view of the lack of any need for or benefit of doing so. *See Hynix Semiconductor*, 645 F.3d 1336 at 1353 (“the fact that a combination is expected to increase cost has some bearing on the obviousness of that combination”); *see also KSR*, 550 U.S. at 418-19 (modification is not obvious without a rational reason to do so).

In fact, Crampton teaches away from doing so. As discussed above, Crampton stresses reducing the cost and complexity of the kiosks. Crampton thus advises to use as few cameras as possible. To this end, its preferred embodiment is a kiosk with a camera on only one side of the person. Crampton thus teaches away

from adding additional cameras to the single camera of Voigt, and a POSA would not do so. *See In re Grasselli*, 713 F.3d at 743 (modification would not be made where prior art teaches away). Rather, a POSA would maintain the single camera in Voigt in accordance with Crampton’s preferred embodiment. *See id.*

For at least the reasons above, challenged claims 1 and 51, and claims 2-8, 11, 30, 33-34 and 46 dependent thereon, are not obvious over Voigt and Crampton. *See In re Fine*, 837 F.2d at 1076.

G. Hurley Does Not Render Claims 1-8, 11, 30, 33-34 and 46 Obvious.

Hurley fails to render claims 1-5, 8, 11, 30, 33-34 and 51 of the ‘748 patent obvious for the reasons discussed below. The Board should find that Canfield’s proposed Ground 3 lacks a reasonable likelihood of invalidating any challenged claims of the ‘748 patent.

Canfield contends that Hurley teaches all the limitations of independent claims 1 except for a portion of the “wherein” clause at the end of the claim. Canfield contends it would be obvious to “use” the distance from the imaging position, focal length and resolution to calculate precise measurements. Canfield is incorrect.

Hurley lacks several limitations of claim 1. As discussed above in Section V.E, Hurley lacks an enclosure that defines a specified imaging position. Without such, Hurley necessarily lacks a specified imaging position defining a centerline as

claimed, and all the limitations of claim 1 related to either the specified imaging position or the centerline:

- A plurality of imaging devices “located on opposite sides of the **centerline** . . .”
- “[E]ach imaging device is located a predetermined distance relative to the **specified imaging position**.”
- Each imaging device “defines respective coordinates and said respective predetermined distance relative to the **specified imaging position**.”

Hurley further lacks a device “allowing precise measurement of imaged features of the person or portion.” As discussed above in Section V.E, Hurley admits that it is unknown whether the device actually works so as to provide sufficiently accurate measurements for clothing. Canfield implicitly acknowledges this too when it states that “Hurley *seeks* accurate surface measurements,” but “work was progressing to extract measurements.” Pet., 66 (emphasis added). The possibility that Hurley does work and provides sufficiently accurate measurements for clothing is insufficient to render the claims obvious. *See In re Robertson*, 169 F.3d at 745 (a feature cannot be deemed present in prior art because it possibly or even probably exists). As for Canfield’s contention that it would be obvious to modify Hurley to use the predetermined distances, focal length and resolution in

measurement calculations, that is based on a faulty claim interpretation, as discussed in Section IV.D.6. The Board should disregard it.

As Hurley lacks multiple limitations of claim 1, claim 1 is not obvious. *See CFMT*, 349 F.3d at 1342. Claims 2-8, 11, 30, 33-34 and 46 dependent thereon are likewise not obvious. *See In re Fine*, 837 F.2d at 1076. Further, in view of the limitations missing from claim 1, at least the following further limitations of the dependent claims are necessarily missing from Hurley:

- “[A]t least two light sources are positioned symmetrically relative to the **center line** . . .” (claim 4)
- “[A] a first imaging array spaced a predetermined distance relative to the **specified imaging position**” (claim 5)
- “[A] second imaging array spaced a predetermined distance relative to the **specified imaging position**, and laterally spaced adjacent to the first imaging array on an opposite side of the **centerline** . . .” (claim 5)
- “[A] third imaging array spaced a predetermined distance relative to the **specified imaging position**” (claim 6)
- “[A] fourth imaging array spaced a predetermined distance relative to the **specified imaging position**” (claim 6)

- “[T]he plurality of light sources is symmetrical about the center line” (claim 7)
- “[A] third light source . . . symmetrical about the center line to the second light source” (claim 7)

The dependent claims are not obvious for these additional reasons. *See CFMT*, 349 F.3d at 1342.

Further regarding claim 6, Hurley lacks a fourth imaging array, but Canfield contends it would be obvious to add a fourth pair of sensors to obtain greater detail of the back of the person. This is pure hindsight reconstruction. Hurley makes no suggestion that more detail is needed for the back of the person or to add an additional set of sensors behind the person. Canfield has, once again, improperly used the claims as a template and then contended, in retrospect, that a POSA would modify Hurley without an adequate reason or rationale at the time of the invention to do so. *See KSR*, 550 U.S. at 418, 421; *Metalcraft of Mayville*, 848 F.3d at 1367; *In re Fritch*, 972 F.2d at 1266.

Canfield contends that a POSA would modify Hurley because “Hurley noted that its design economized on the number of sensor arrays” and thus a POSA would add a fourth pair of sensors “if greater detail was desired.” Pet., 71. Canfield mischaracterizes Hurley. Hurley says nothing about its design being “economized.” Further, it is the ‘748 patent that discusses the desirability of

additional imaging arrays, not Hurley. Obviousness cannot be based on the patentee's own disclosure. *See In re McLaughlin*, 443 F.2d 1392, 1395 (C.C.P.A. 1971).

For at least the reasons above, challenged claims 1-8, 11, 30, 33-34 and 46 are not obvious over Hurley.

H. Claims 6-7 Are Not Obvious over Voigt, Hurley and Daanen.

The combination of Voigt, Hurley and Daanen fails to render claims 6 and 7 obvious for the reasons below. The Board should find that Canfield's proposed Ground 4 lacks a reasonable likelihood of invalidating any challenged claims of the '748 patent.

1. Summary of Daanen.

Daanen briefly describes eight scanning systems that generate a copy of the surface geometry of the human body. Ex. 1005, 111. Canfield's challenge to claims 6 and 7 relies solely on the Vitronic system mentioned in Daanen.⁹ Pet., 76-77. The Vitronic system uses a laser scanning technique, similar to Crampton. *See* Ex. 1005, 112-13, 115. That is, the lasers and cameras are mounted on a *moving*

⁹ The Petition briefly mentions, but does not rely on, the TC² system, which is the Hurley device. Canfield mischaracterizes Daanen when it states that the TC² system "was used in the apparel industry." Pet. at 20. Nothing in Daanen (or Hurley) states or suggests that the TC²/Hurley system had been used in the apparel industry. Rather, Daanen states that "Later, the [TC²] system **will be** commercialized," Ex. 1005 at 115 (emphasis added), meaning that the system had not been commercialized; commercialization was merely a goal.

frame and moved upwards and downwards to “scan” the person as a thin horizontal laser line is progressively projected onto the body surface. *Id.*

2. A POSA Would Not Have Modified Voigt and Hurley in View of Daanen, and If One Did, the Combination Would Not Provide the Claimed Invention.

Claims 6 and 7 depend from claim 1, which as demonstrated in in Section IV.E above, is not obvious over Voigt and Hurley. Claims 6 and 7 are therefore not obvious either. *See In re Fine*, 837 F.2d at 1076.

Moreover, Canfield’s proposed combination would not result in the invention. Canfield contends that it “would have been an obvious design choice” to use the Vitronic camera arrangement in the alleged Voigt/Hurley combination. *Pet.*, 77. If a POSA would have done so, however, a POSA would have used the *moving* cameras of the Vitronic system in the combination. This is especially so because the original Voigt system, similar to the Vitronic system, has a vertically moving camera. *See* MPEP § 2143.01(VI); *In re Ratti*, 270 F.2d at 813. To the extent Canfield contends otherwise, such would be improper hindsight by using the claims as a guide to “pick and choose” features from the prior art to construct the invention. *See In re NTP*, 654 F.3d at 1298; *In re Fine*, 837 F.2d at 1075 (one cannot “pick and choose” from the prior art disclosures); *see also Metalcraft of Mayville*, 848 F.3d at 1367.

The resulting combination would thus have moving cameras that are moved up and down to scan the patient. Accordingly, the system would not have and could not have imaging devices located a predetermined distance to a specified imaging position and defining respective coordinates and said respective predetermined distance as claimed (through the dependency of claim 6 on claim 1). The system would lack multiple limitations of claim 6, and so claim 6 (and claim 7 dependent thereon) is not obvious. *See CFMT*, 349 F.3d at 1342; *In re Fine*, 837 F.2d at 1076.

Canfield's rationales for modification in view of Daanen also fail. For claim 6, Canfield contends that a POSA would add the additional cameras of Daanen as "an obvious design choice to achieve total body coverage." Pet., 77. However, the alleged Voigt/Hurley combination would already provide total body coverage. Nothing in the prior art suggests that Hurley's coverage is inadequate so that one of ordinary skill would even seek to modify the system in view of Daanen. Nor does the prior art suggest (nor Canfield) that the additional imaging array in Daanen would improve upon the Hurley arrangement so as to lead a POSA to make the alleged modification. *See Hynix Semiconductor*, 645 F.3d at 1353. Without an adequate reason to make the modification, a POSA would not do so. *See KSR*, 550 U.S. at 419 (a claim "is not proved obvious merely by demonstrating that each of its elements was known, independently, in the prior art"). On the other

hand, adding additional imaging arrays as allegedly disclosed in Daanen would inject additional cost and complexity into the system. A POSA would not modify the prior art to make it more costly and complex, especially in view of the lack of any need for or benefit of doing so. *See id.* at 418-19; *Hynix Semiconductor*, 645 F.3d at 1353.

For claim 7, Canfield contends that it would be an “obvious design choice” to use the lighting arrangement of Daanen to “illuminate the subject, and to do so symmetrically . . . because it ensures consistent illumination.” Pet., 79. However, the lighting arrangements of Voigt and Hurley illuminate the subject symmetrically and consistently. *E.g.*, Ex. 1003, FIG. 1 (symmetric light sources); Ex. 1004, FIG. 2.1 (symmetric lighting). Nothing in the prior art suggests otherwise, or that there is some inadequacy of Voigt or Hurley’s lighting so that a POSA would seek to further modify it in view of Daanen. Nor does the prior art suggest that the arrangement in Daanen would improve upon the Voigt or Hurley arrangements. In contrast, adding additional lighting arrays as (allegedly) taught by Daanen would inject additional cost and complexity into the system. A POSA would not do so. *See KSR*, 550 U.S. at 418-19; *Hynix Semiconductor*, 645 F.3d at 1353.

For at least the reasons above, challenged claims 6 and 7 are not obvious over Voigt, Hurley, and Daanen.¹⁰

I. Claims 32 and 36 Are Not Obvious over Voigt, Crampton and Dye.

The combination of Voigt, Crampton and Dye fails to render claims 32 and 36 obvious. Claims 32 and 36 depend from claim 1, which as demonstrated in Section IV.F above, is not obvious over Voigt and Crampton. Claims 32 and 36 are therefore not obvious either.¹¹ *See In re Fine*, 837 F.2d at 1076. The Board should find that Canfield's proposed Ground 5 lacks a reasonable likelihood of invalidating any challenged claims of the '748 patent.

V. CONCLUSION

For at least the foregoing reasons, Canfield fails to establish a reasonable likelihood that any of the challenged claims are invalid over the art cited in the Petition. Thus, the Board should therefore not institute trial on the basis of the grounds presented.

¹⁰ As Canfield's challenge relies only on the Vitronic system, Melanoscan need not address the other systems discussed in Daanen. Nonetheless, none of the other systems can render claims 6 and 7 obvious. Claim 6 requires that the system has at least eight imaging devices. Only one other system, the Hamamatsu system, has at least eight cameras. *See* Ex. 1005 at 118. That system, like the Vitronic system, utilizes moving cameras. *Id.* at 117-118 (cameras scan from top to bottom); FIG. 10. The claims are not obvious over the Hamamatsu system for the same or similar reasons they are not obvious over the Vitronic system.

¹¹ Melanoscan reserves the right to assert that claims 32 and 36 are patentable independently of claim 1 should an IPR be instituted.

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CERTIFICATION UNDER 37 C.F.R. § 42.24(d)

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Patent Owner's Preliminary Response totals 13,909, which is less than the 14,000 allowed under 37 C.F.R. § 42.24(a)(1), (b)(1).

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CERTIFICATE OF SERVICE

I hereby certify that on this 2^d day of January, 2018, a true and correct copy of the foregoing Patent Owner's Preliminary Response and its Exhibits, including this Certificate of Service, has been caused to be served in its entirety via electronic mail on counsel of record for Petitioner as set forth below, and through filing this document through the Patent Trial and Appeal Board End to End System:

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