UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CANFIELD SCIENTIFIC, INC., Petitioner,

v.

MELANOSCAN, LLC, Patent Owner.

Case IPR2017-02125 Patent 7,359,748

Before JOHN C. KERINS, MICHAEL W. KIM, and SCOTT C. MOORE, *Administrative Patent Judges*.

KERINS, Administrative Patent Judge.

DECISION Instituting *Inter Partes* Review 35 U.S.C. § 315(a)(1) and 37 *C.F.R.* § 42.108

I. INTRODUCTION

A. Background

Canfield Scientific, Inc. ("Petitioner") filed a Petition requesting *inter partes* review of claims 1–8, 11, 30, 32–34, 46, and 51 of U.S. Patent No. 7,359,748 (Ex. 1001, "the '748 patent"). Paper 9 ("Pet.).¹ Melanoscan, LLC ("Patent Owner") filed a Preliminary Response asserting, *inter alia*, that the Petition is barred by 35 U.S.C. § 315(a). Paper 11 ("Prelim. Resp"). Petitioner filed, having sought and received authorization from the Board (Paper 13), a Reply to Patent Owner's Preliminary Response, limited to Patent Owner's position that the Petition is barred. Paper 14 ("Reply").

B. Related Proceedings

Petitioner and Patent Owner identify that Petitioner filed, on August 1, 2016, a Civil Action seeking, *inter alia*, a declaration of non-infringement of the '748 patent. Pet. 1–2; Prelim. Resp. 1; Ex. 2001; "First Action." The First Action was filed in the U.S. District Court for the District of New Jersey, and is captioned *Canfield Scientific, Inc. v. Melanoscan LLC and Dr. Rhett Drugge*, Civil Action No. 2:16-cv-04636-JMV-JBC (D.N.J. 2016). Pet. 1.

Petitioner and Patent Owner further identify that Patent Owner filed and served on Petitioner, on June 9, 2017, a counterclaim alleging that Petitioner infringes one or more claims of the '748 patent. Pet. 1; Prelim. Resp. 1; Ex. 2002; "Counterclaim of Infringement." The parties further identify that Petitioner filed a paper titled "Answer and Counterclaim" in response to Patent Owner's counterclaim of patent infringement. Pet. 2;

¹ Reference to the Petition herein is to the Corrected Petition, entered November 27, 2017.

Prelim. Resp. 1; Ex. 2003; "Counterclaim of Invalidity." Petitioner's Counterclaim of Invalidity includes a counterclaim for declaratory judgment that the claims of the '748 patent are invalid. *Id.* Exhibit 2003 indicates that this paper was filed and served on June 30, 2017. Ex. 2003.

The Petition in this matter was accorded a filing date of September 21, 2017. Paper 5.

II. PATENT OWNER CHALLENGE UNDER 35 U.S.C. § 315

A. Contentions

Petitioner, at the outset, citing to 35 U.S.C. § 315(a)(3), maintains that review here is proper, in that "[a] counterclaim for declaratory judgment, filed in response to an action for patent infringement, does not bar inter partes review." Pet. 2. Petitioner further maintains that the Petition is timely under the provisions of 35 U.S.C. § 315(b), in that the Petition was filed within one year of Petitioner having been served with Patent Owner's counterclaim of infringement. *Id.* at 1.

Patent Owner contends that Petitioner's Counterclaim of Invalidity is not a "counterclaim" within the meaning of 35 U.S.C. § 315(a)(3), but is instead properly regarded as an amendment to its originally-filed First Action, and is, thus, a "fil[ing of] a civil action challenging the validity of a claim of the patent," and, thus, is statutorily time-barred by 35 U.S.C. §315(a)(1). Prelim. Resp. 3–18.

B. Analysis

Sections 315(a)(1) and (a)(3) of Title 35 of the United States Code provide that:

(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.

(a)(3) *Treatment of counterclaim.*—A counterclaim challenging the validity of a claim of a patent does not constitute a civil action challenging the validity of a claim of a patent for purposes of this subsection.

There is no question that the instant Petition was filed subsequent to Petitioner's filing of its Counterclaim of Invalidity. The threshold issue, however, based on a challenge raised by Patent Owner, is whether Petitioner's Counterclaim of Invalidity amounts to the filing of a civil action challenging the validity of the patent within the meaning of 35 U.S.C. § 315(a)(1), or constitutes a "counterclaim" under 35 U.S.C. § 315(a)(3). As explained below, we determine that Petitioner's Counterclaim of Invalidity is not the filing of a civil action challenging the validity of the '748 patent, but is instead a "counterclaim" under 35 U.S.C. § 315(a)(3).

First and foremost, the language of 35 U.S.C. § 315(a)(3), quoted above, uses the term "counterclaim," and explicitly distinguishes a "counterclaim" challenging validity from the "fil[ing] of a civil action challenging validity" referred to in § 315(a)(1). The filing of such a civil action prohibits the later filing of a petition seeking *inter partes* review. Subsection 315(a)(3), however, affirmatively states that a "counterclaim" for invalidity filed by an accused infringer does not constitute the filing of a civil action asserting invalidity.

Petitioner's Counterclaim of Invalidity meets the literal terms of 35 U.S.C. § 315(a)(3). Patent Owner's arguments have been fully considered, but do not persuade us that the statutory language must be interpreted in a

manner different from its plain, literal meaning.

Patent Owner first maintains that the interpretation of "counterclaim" in § 315(a)(3) should be based on an ordinary and contemporary meaning of "counterclaim," which, according to Patent Owner is a claim made by a defendant against a plaintiff. Prelim. Resp. 7–10. Patent Owner asserts that the situation is reversed here, and that Petitioner's Counterclaim for Invalidity is actually a "counterclaim-in-reply." While acknowledging that Petitioner's Counterclaim of Invalidity includes the term "counterclaim," Patent Owner asserts that a "counterclaim-in-reply" is substantively distinguishable, and should be regarded as falling outside the scope of the term "counterclaim" recited in \S 315(a)(3). We disagree. The statutory sections at issue are both within the context of an "[i]nfringer's civil action," and, as noted above, § 315(a) addresses both a "civil action challenging the validity of a claim of a patent," and a "counterclaim challenging the validity of a claim of a patent." The express statutory language does not parse certain "counterclaims," such as "counterclaims-in-reply," from other "counterclaims." Patent Owner asserts, and we agree, that 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. Robinson v. Shell Oil Co., 519 U.S. 337 (1997). Having said that, here, we do not find that "counterclaim," as employed in § 315(a)(3), is ambiguous or susceptible of multiple interpretations. Section 315(a)(3) simply, and, in our view, unambiguously, states that "counterclaims," whether a "counterclaim-in-reply" or otherwise, are within the scope of the term "counterclaim" recited in § 315(a)(3). Accordingly, Petitioner's Counterclaim of Invalidity is, by its own express

terms, a "counterclaim," that falls within the scope of § 315(a)(3), ending the inquiry.

Alternatively, Patent Owner argues that the legislative history of § 315 supports its position that a "counterclaim-in-reply" asserting invalidity is to be regarded as "a civil action challenging validity" within the scope of § 315(a)(1). Prelim. Resp. 11–13. Patent Owner maintains that "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.* at 12, citing Ex. 2007. Patent Owner additionally posits that "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." *Id.* at 13. We disagree.

These arguments misread the statutory language, in that they fail to take into account that the provisions of § 315(a) relate to, by explicit language, "[*i*]nfringer's civil action." Given that title, which only mentions provisions based on the actions of an "infringer" (i.e., petitioner), we are unpersuaded that §§ 315(a)(1)-(3) "address different circumstances depending upon whether an accused infringer or a patentee files the civil action," as asserted by Patent Owner. Indeed, Patent Owner's assertions are further unpersuasive, given that 35 U.S.C. § 315(b) explicitly addresses "[*p*]atent owner's action," i.e., provisions, such as time bars, related to actions of a patentee (i.e., patent owner). The separation of the two subsections, based on which party initiates a civil action, belies Patent Owner's arguments that different provisions of only one of those subsections, §§ 315(a)(1)-(3), should be interpreted differently, based on the party initiating the civil action. In other words, by their own terms,

§§ 315(a)(1)–(3) only refer to actions taken by an "infringer" (i.e., petitioner), and we are unpersuaded that we should differentiate, under §§ 315(a)(1)–(3), certain actions taken by the "infringer" (i.e., petitioner) depending on the types of preceding actions that were made by the patentee (i.e., patent owner). We additionally note that Patent Owner has not directed us to any legislative history that addresses specifically the provision in 35 U.S.C. § 315(a)(3), and we are not ourselves aware of any such history. Accordingly, for these reasons, we are unpersuaded that a "counterclaim-inreply" should be treated as a "civil action" under §§ 315(a)(1).

With respect to both "civil action" and "counterclaim," Patent Owner further argues that Congress would not have intended a result that would allow an accused infringer to avoid having to decide between challenging validity in court, or filing a petition seeking *inter partes* review. Prelim. Resp. 14. In other words, Patent Owner appears to be asserting that interpreting the statute in this manner would effectively allow a Petitioner to initiate a civil action concerning a patent, but also later file a petition seeking *inter partes* review, frustrating one of the goals of these proceedings as being an alternative to district court proceedings. *Id.* We do not deny that Patent Owner's assertions, as a policy matter, have some merit. Nevertheless, we determine that Congress has spoken, using unambiguous language, concerning "a civil action challenging the validity of a claim of the patent," as in § 315(a)(1), and "counterclaim," as in § 315(a)(3). In our view, the above-referenced policy considerations do not override the unambiguous statutory language.

Under the circumstances before us, the Petition is not barred by 35 U.S.C. 315(a)(1) and (3).

III. INTER PARTES REVIEW

We have jurisdiction under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted unless the information presented in the Petition shows "there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a); *see also* 37 C.F.R. § 42.4(a). Upon consideration of the Petition, Preliminary Response, and the associated evidence, we determine that Petitioner has met its burden of showing a reasonable likelihood it would prevail in showing that claims 1–8, 11, 30, 32–34, 46, and 51 are unpatentable on certain grounds of unpatentability.

A. The '748 Patent

The '748 patent discloses that the claimed invention "relates to the detection, diagnosis and treatment of skin cancer as well as other diseases and cosmetic conditions of the visible human." Ex. 1001, 1:22–24. The invention involves "[a] device allow[ing] for the imaging of total or subtotal non-occluded body surfaces in order to detect health and cosmetic conditions and involves the measurement and analysis of an optically depicted image of a patient's surfaces." *Id.* at 1:6–11. The '748 patent cites "a need for a practical device that allows for the rapid screening of individuals for skin cancer and other maladies of the skin in early stages of development." *Id.* at 1:51–53. The '748 patent coins the term "Total Immersion Photography" or "TIP," in referring to the device, and describes generally that it is "a digital image acquisition device, the products of which are capable of a variety of applications," including "panoramic mosaics of the body, 3-D models of the body, images for use with 'machine vision', and interfacing with medical records." *Id.* at 3:47–63

B. Illustrative Claim

Petitioner challenges claims 1–8, 11, 30, 32–34, 46, and 51 of the

'748 patent. Of these, claims 1 and 51 are independent. Claim 1 is

illustrative of the challenged claims, and is reproduced below.

1. A device for the identification of maladies that effect human tissue comprising:

an enclosure configured to receive a person or portion thereof for imaging the person or portion thereof, wherein the enclosure defines a specified imaging position for placing the person or portion thereof within the enclosure for imaging, and the specified imaging position defines a centerline;

a plurality of imaging devices, wherein a plurality of the imaging devices are vertically spaced relative to each other, a plurality of the imaging devices are laterally spaced relative to each other, a plurality of the imaging devices are located on opposite sides of the centerline of the specified imaging position relative to each other, and each imaging device is located a predetermined distance relative to the specified imaging position; and

a plurality of light sources spaced relative to each other and peripheral to the plurality of imaging devices that illuminate the person or portion thereof located at the specified imaging position and generate refraction and reflectance light therefrom;

wherein each of said imaging devices generates an image of the illuminated person or portion thereof located at the specified imaging position, and 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.

C. Asserted Grounds of Unpatentability

Petitioner challenges claims 1–8, 11, 30, 32–34, 46, and 51 as follows:

ReferencesBasisChallenged Claim	18
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Voigt ² and Hurley ³	§ 103(a)	1–5, 8, 11, 30, 33, 34, 46, and 51
Voigt and Crampton ⁴	§ 103(a)	$1-4$, 8, 11, 30, 33, 34, and 51^5
Hurley	§ 103(a)	1–8, 11, 30, 33, 34, 46, and 51
Voigt, Crampton, Daanen ⁶	§103(a)	6 and 7
Voigt, Crampton, Dye ⁷	§103(a)	32 and 46

Petitioner relies on its Petition, which in turn relies on the Declaration of Dr. Jan-Peter Muller (Ex. 1016)("Muller Declaration" or "Muller Decl."). Patent Owner relies on arguments presented in the Preliminary Response.

D. Analysis

(i) Claim Construction

In an *inter partes* review, a claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears. 37 C.F.R. § 42.100(b); *see also Cuozzo Speed Techs., LLC v. Lee*, 136 S.Ct. 2131, 2142 (2016) (affirming that USPTO has statutory authority to construe claims according to 37 C.F.R. § 42.100(b)).

² Voigt and Classen, "Topodermatographic Image Analysis for Melanoma Screening and the Quantitative Assessment of Tumor Dimension Parameters of the Skin," Cancer 1995 Fed; 75(4):981–988 (Ex. 1003, "Voigt").
³ Hurley et al., "Body Measurement System Using White Light Projected Patterns for Made-to-Measure Apparel," SPIE Vol. 3131, July 7, 1997, 212–222 (Ex. 1004, "U. 1.").

^{223 (}Ex. 1004, "Hurley").

⁴ WO 98/28908, publ. July 2, 1998 (Ex. 1006, "Crampton").

⁵ Petitioner's summary chart identifying the bases for challenging patentability of the claims erroneously identifies claim 5 as being subject to challenge over the combination of Voight and Crampton. Pet. 2. In the body of the Petition, no basis is set forth as to why claim 5 is asserted to be unpatentable over Voigt and Crampton. Pet. 47–60.

⁶ Daanen and van de Water, "Whole Body Scanners," Displays 19 (1998) 111–120 (Ex. 1005, "Daanen").

⁷ WO 99/56249 (Ex. 1007, "Dye").

Under the broadest reasonable construction standard, claim terms are generally given their ordinary and customary meaning, as would have been understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Any special definition for a claim term must be set forth in the specification with reasonable clarity, deliberateness, and precision. *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994). We must be careful not to read a particular embodiment appearing in the written description into the claim if the claim language is broader than the embodiment. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). For the purposes of this Decision, we determine that only the below claim term needs express interpretation. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) ("[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.").

"centerline"

Independent claim 1 includes a limitation requiring that a recited specified imaging position "defines a centerline." Ex. 1001, 22:2–3. Independent claim 51 recites a "second means . . . for specifying an imaging position," and that the second means "defines a centerline." *Id.* at 25:24–27.

Petitioner takes the position that "centerline" would have been understood by a person of ordinary skill in the art as referring to "a line dividing the imaged object through its center. Pet. 7, citing Ex. 1016 ¶¶ 46, 87. In the case of imaging a person, Petitioner maintains that such a centerline would have been understood as a line dividing the body along the frontal plane or sagittal plane. *Id*.

Patent Owner objects to such construction, and maintains that, because the claims are directed to a device, the claimed centerline is a structural feature of the device. Prelim. Resp. 27. Patent Owner additionally points to the disclosure in the '748 patent that a person could easily stand "at the center 108 of the device," as evidencing that the centerline is a characteristic of the device, and not of a person being imaged in the device. *Id.* at 28, citing Ex. 1001, 18:36–39. We note that the term "centerline" does not appear in the main text of the '748 patent, but appears only in the claims.

Notwithstanding, on this record, we preliminarily agree with and adopt Patent Owner's construction for the purposes of this Decision, for the above reasons advanced by Patent Owner. The parties will have the opportunity to advance any other assertions concerning the claim construction of "centerline" during trial.

(*ii*) Claims 1–5, 8, 11, 30, 33, 34, 46, and 51 as Unpatentable over Voigt and Hurley

Petitioner asserts that these claims would have been obvious over Voigt and Hurley. Pet. 26–47. Patent Owner disagrees, asserting that the combination of teachings is flawed for several reasons. Prelim. Resp. 33– 45. Claims 1 and 51 are independent.

(a) Voigt

Voigt discloses a system for imaging and measuring skin lesions, and particularly measuring changes in such skin lesions over time. Ex. 1003, 981. A drawing figure of the system appearing at page 982 of Voigt, and annotated by Petitioner, is presented below.



The above annotated Voigt drawing is a schematic view of the system and apparatus employed by Voigt, showing an enclosure in which a video camera and a plurality of lights are positioned on the right, and patientpositioning elements are provided on the left. Ex. 1003, 982. Voight discloses using a single, vertically-adjustable camera for performing the imaging. *Id.*

(b) Hurley

Hurley discloses a three-dimensional ("3D") body imaging system that includes an apparatus employing six stationary imaging devices (sensors) positioned on three towers, with each tower having a lower and an upper sensor. Ex. 1004, 212–213. Two of the towers are laterally separated and disposed so that the sensors may image a front of a body, and the third tower is positioned so that its sensors may image a rear of the body. *Id.* A drawing figure of the Hurley system, as annotated by Petitioner, appears below.



The figure above is a perspective view of the Hurley system, with the positions of the imaging devices identified (by annotation) with numerals 1–6. Ex. 1004, 213.

(c) Analysis

Based on the information presented in the Petition and Preliminary Response, as well as all supporting evidence, we are persuaded that there is a reasonable likelihood that Petitioner would prevail in showing that claims 1– 5, 8, 11, 30, 33, 34, 46, and 51 are unpatentable over a combination of Voigt and Hurley. Pet. 26–46; Prelim. Resp. 33–44.

Independent Claim 1, for example, is directed to a device for the identification of maladies that affect human tissue. Petitioner points to Voigt as disclosing a device that identifies and evaluates changes of cutaneous lesions in melanoma screenings that obtains digitized measurements of skin-surface image parameters, and, thus, appears to be used for the same purpose as the claimed invention.

Independent claim 1 further requires that the device include an enclosure configured to receive a person or portion thereof for imaging same, with the enclosure defining a specified imaging position, and with the specified imaging position defining a centerline. Petitioner relies on Voigt as disclosing the claimed enclosure with a specified imaging position. Also, notwithstanding that we preliminarily agree with Patent Owner that the claimed centerline is a characteristic of the device, and is not defined by the subject being imaged, Petitioner has, nevertheless, identified a centerline that is defined by the specified imaging position in its annotated version of the figure in Voigt. Pet. 27 (specified imaging position defined by sliders and stand, centerline in device extending through center of specified imaging position). Petitioner has also identified an alternative centerline in the annotated version of the Hurley drawing, which is indicative that the centerline in a device having forward and rear imaging devices may be transverse to the forward and rear directions. Pet. 29 (green dotted line).

Independent claim 1 additionally requires a plurality of imaging devices, including a plurality of imaging devices that are vertically spaced relative to each other, a plurality that are laterally spaced relative to each other, and a plurality that are located on opposite sides of the centerline of the specified imaging position relative to each other, with each imaging

device being located at a predetermined distance relative to the specified imaging position. Petitioner cites Hurley as disclosing a plurality of imaging devices meeting the various positioning requirements, and, with respect to the relationship of the imaging devices to the specified imaging position and centerline, the structure resulting from the modification of Voigt by Henley.

Independent claim 1 also requires a plurality of light sources spaced relative to each other and peripheral to the plurality of imaging devices to illuminate the person or portion thereof located at the specified imaging position. Petitioner cites to Voigt as well as Henley as each disclosing a plurality of light sources meeting the claim limitations.

Independent claim 1 finally includes a "wherein" clause that recites that each of the imaging devices generates an image of the illuminated person or portion thereof, and each of the imaging devices defines: respective coordinates and respective predetermined distance relative to the specified imaging position; and respective focal length and resolution information. The "wherein" clause sets forth that these aspects of the device allow precise measurement of imaged features of the person or portion thereof located at the specified imaging position. Petitioner points out that the device and methodology employed in Voigt would have made apparent to a person of ordinary skill in the art that Voigt discloses these claimed aspects.

Petitioner provides several rationales for modifying the Voigt device, in view of the Hurley disclosure, in a manner such that the resulting device includes the plurality of imaging devices, as claimed, as well as all other limitations of claim 1 already present in the Voigt device. Citing the Muller Declaration, Petition identifies the following as examples of rationales for

replacing the single, vertically-adjustable camera in Voigt with an imaging device arrangement as disclosed in Hurley: obvious advantages including (i) the ability to cover the entire body without repositioning; (ii) the increased resolution of the imaged subject with multiple cameras; (iii) the ability to avoid artificial shadowing or shading effects potentially encountered in single camera systems; (iv) the reduced time needed to scan a whole body; and (v) avoidance of maintenance due to durability issues with a single moving camera as opposed to multiple fixed cameras. Pet. 30, citing Ex. 1016, ¶¶ 73, 115–122, 134–143, 157.

Petitioner sets forth similar analyses for independent claim 51, as well as for claims 2–5, 8, 11, 30, 33, 34, and 46, which all depend from claim 1. Pet. 34–47. Petitioner as well sets forth rationales, as needed, as to why a person of ordinary skill in the art would have found it obvious to modify Voigt in view of Hurley. *Id*.

Patent Owner asserts that both Voigt and Hurley are missing multiple limitations found in claims 1 and 51, and, as such, a combination of the teachings would fall short of meeting all limitations. Prelim. Resp. 38. Specifically, Patent Owner notes that, because the Voigt camera is movable vertically, the distance between the camera and the position framework is variable, and, thus, the camera is not located at a predetermined distance relative to the specified imaging position as claimed. *Id.* Patent Owner notes that Hurley does not provide a particular or specific location at which the person is to stand, and, therefore, that the claim limitation is not met by Hurley either.

Patent Owner's assertions amount to individual attacks on the references, and do not take into account what the structure resulting from the

combination would include. *See In re Keller*, 642 F.2d 413 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091 (Fed. Cir. 1986) (non-obviousness cannot be established by attacking references individually where rejections are based on combinations of references). The combination proposes replacing the vertically-movable camera with a plurality of cameras that are fixed in place, as taught in Hurley, and retaining the specified imaging position provided by Voigt, which, according to Petitioner, results in a plurality of cameras located at predetermined distances relative to the specified imaging position. On this record, we agree with Petitioner's assessment.

Patent Owner next asserts that Petitioner's proposed modification to include a plurality of cameras on the Voigt device would also involve several other constructional changes, including relocating the Voigt 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, and removing the patient position framework and the horizontal sliders. Prelim. Resp. 40. According to Patent Owner, these amount to substantial changes, and Petitioner has not provided adequate rationale for the breadth of the changes, and, therefore, the proposed modification to Voigt involves the use of impermissible hindsight reconstruction. *Id.* at 41.

Patent Owner does not specifically contest that any of the rationales advanced by Petitioner are flawed from a technology standpoint, nor does Patent Owner maintain that the possible additional changes that might be required would be beyond the level of ordinary skill in the art. Petitioner, on the other hand, has established, to this point, that the various rationales are derived from the teachings in the art, and not from any particular disclosure

in the '748 patent, and our evaluation, on this record, indicates that Petitioner's analysis is adequate at this stage of the proceeding.

Patent Owner further asserts that Voigt teaches away from the invention, and presumably from the proposed modification to Voight. Prelim. Resp. 42. Patent Owner avers that Voigt teaches the use of a moving camera to properly image the patient and provide reproducibility in later imaging, which is asserted to amount to a teaching away from using imaging devices located a predetermined distance from a specified imaging position. *Id.*

Patent Owner's position is flawed both factually and legally. Although the Voigt camera is vertically adjustable, it is not moved during the time the patient is imaged. Ex. 1003, 982. Rather, the vertical height is adjusted, the selected position is recorded and, presumably, reused for subsequent imaging. *Id.* (discussing adequate reproducibility if image boundaries, etc., are identical). As such, imaging is not affected by switching to fixed-position cameras or imaging devices. Further, in order for a reference to be regarded as teaching away from a particular construction, the reference must be shown as criticizing, discrediting or otherwise discouraging the proposed modification. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004); *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Patent Owner does not allege that Voigt includes any such disclosure.

Patent Owner asserts that the proposed modification to Voigt would render that device inoperable for its intended purpose. Prelim. Resp. 42–43. In particular, Patent Owner again notes that a modification to include a camera positioned to image from the rear of the subject would require the

removal of the rear wall of Voigt, along with the patient positioning framework and horizontal sliders carried by that wall. *Id.* Patent Owner maintains that the patient position structure is critical to the Voigt system, in order to provide the needed reproducibility of imaging for monitoring and measuring melanomas. *Id.* Patent Owner asserts that the modification to Voigt would thus not function as needed. *Id.* at 43.

We acknowledge that the patient positioning elements are disclosed by Voigt as being important, if not arguably critical, to the successful use of Voigt in obtaining successive images that can be reliably compared in order to monitor a melanoma or other skin lesion over time. Petitioner, however, by way of the Muller Declaration, addresses the possibility that a rear wall would have needed to be eliminated, in Voigt, in order to allow rear imaging devices to image the rear side of a subject, and presents testimony, to the effect that removal of wall does not require a loss of the patient positioning elements. Ex. 1016 ¶ 125. According to the Muller Declaration, positioning devices such as the horizontal sliders could have remained attached to the existing outer framework or to the stand. *Id.* As such, based upon the record before us, we are unpersuaded that Voigt would be rendered inoperable by the modification thereto in view of Hurley.

Patent Owner next asserts that a person of ordinary skill in the art would not have had a reasonable expectation that the modified Voigt device would work successfully. Prelim Resp. 43–44. Patent Owner essentially repeats the argument discussed above relative to the possibility that the patient positioning elements would be eliminated, with the device thus not being able to achieve the required reproducibility of the imaging. *Id.* at 43. This position is unpersuasive for the same reasons as noted above.

Patent Owner also asserts that no reasonable expectation of success exists, because Hurley discloses, in connection with its system, that it was not known whether the system could provide accurate measurements. Prelim. Resp. 43. This overstates what Hurley actually discloses. Hurley indicates that "[w]ork is ... progressing" in the area of extracting measurements from the data sets, not that Hurley and his colleagues had yet been unable to obtain any measurements. Ex. 1004, 223. Patent Owner additionally critiques Hurley as seeking to provide measurements for clothing, and not millimeter-scale measurements, and that Hurley is not concerned with reproducibility of similar images over time. Prelim. Resp. 44. As such, according to Patent Owner, these dissimilarities would result in the person of ordinary skill in the art not having any reasonable expectation that the modification to Voigt would result in a system that could successfully measure and track melanomas. Even if, as asserted, Hurley is not concerned with reproducibility over time, that is of no moment, in that the patient positioning aspect of Voigt are maintained in the modification. At this point in time, Patent Owner's argument directed to the expected precision of the measurements is unsupported by evidence, and is contrary to evidence presented by Petitioner to the effect that persons of ordinary skill in the art would have recognized that the use of a larger number of cameras in a simultaneous acquisition system would have permitted each camera to focus on a smaller area, increasing the number of pixels capable of capturing a particular surface feature. See Ex. 1016 ¶ 119. On this record, and at this juncture, we credit Petitioner's evidence on this issue, however, both parties will have the opportunity to further develop relevant arguments and evidence during trial.

Patent Owner additionally asserts that the proposed modification to the Voigt device would improperly change the principle of operation of Voight. Prelim. Resp. 45. The specific points raised in this allegation are the same as those already addressed above, relative to the removal of the rear wall of Voigt, and the alleged loss of the ability to use the patient positioning elements carried by the wall. *Id.* For the same reasons discussed above, are not, on this record and at this juncture in the proceeding, persuaded that this would be the case.

(d) Reasonable Likelihood of Prevailing on Asserted Ground

For the foregoing reasons, we conclude, on this record, that there is a reasonable likelihood that Petitioner would prevail on the ground that claims 1-5, 8, 11, 30, 33, 34, 46, and 51 are unpatentable over a combination of Voigt and Hurley.

(iii) Claims 1–4, 8, 11, 30, 33, 34, and 51 as Unpatentable over Voigt and Crampton

Petitioner asserts that these claims would have been obvious over Voigt and Crampton. Pet. 47–60. Patent Owner disagrees, asserting that the combination of teachings is flawed for several reasons. Prelim. Resp. 45– 52. Claims 1 and 51 are independent.

(a) Crampton

Crampton discloses a kiosk employed to capture a three-dimensional (3D) image of a human body using multiple cameras placed on each side of the body, so as to capture the whole body in a single pose. Ex. 1006, 9. Drawing figures of particular embodiments of Crampton relied on by Petitioner are presented below. Figure 1 appears as follows.



Figure 1 of Crampton above is a perspective, substantially schematic view of a kiosk designed to obtain a 3D image of a person positioned in the kiosk. Figure 6 of Crampton, annotated by Petitioner, appears below.



Figure 6 of Crampton above is an annotated top, substantially schematic view of a kiosk according to one embodiment disclosed in Crampton.

(c) Analysis

Based on the information presented in the Petition and Preliminary Response, as well as all supporting evidence, we are persuaded that there is a reasonable likelihood that Petitioner would prevail in showing that claims 1– 4, 8, 11, 30, 33, 34, and 51 are unpatentable over a combination of Voigt and Crampton. Pet. 47–60; Prelim. Resp. 45–52.

Petitioner applies Voigt to the limitations of independent claim 1 in the same manner as summarized above in the discussion of proposed unpatentability over Voigt and Hurley. Specifically, Petitioner asserts that Voigt discloses all limitations with the exception of a plurality of cameras. Pet. 47.

Relative to the claim limitations involving a plurality of imaging devices, independent claim 1 requires that the plurality of imaging devices include a plurality of imaging devices that are vertically spaced relative to each other, a plurality that are laterally spaced relative to each other, and a plurality that are located on opposite sides of the centerline of the specified imaging position relative to each other, with each imaging device being located at a predetermined distance relative to the specified imaging position. Petitioner relies on Crampton as disclosing a plurality of imaging devices meeting the various positioning requirements, and, with respect to the relationship of the imaging devices relative to the specified imaging position and centerline, the structure resulting from the modification of Voigt by Crampton.

Petitioner relies on the same proffered rationales for modifying the Voigt device in view of the Crampton disclosure, as were presented in the proposed combination of Voigt and Hurley. Pet. 53.

Petitioner sets forth similar analyses for independent claim 51, as well as for claims 2–4, 8, 11, 30, 33, and 34, which all depend from claim 1. Pet. 55–60. Petitioner as well sets forth rationales, as needed, as to why a person of ordinary skill in the art would have found it obvious to modify Voigt in view of Crampton. *Id*.

Patent Owner asserts that a combination of the teaching of Voigt with a first embodiment of Crampton employing imaging devices that are moved on linear axes to obtain laser stripe data. Prelim Resp. 47–48. According to Patent Owner, because the imaging device in Voigt itself is vertically adjustable, and thereby is not located a predetermined distance relative to the specified imaging position, a modification involving the use of plural moving imaging devices would, too, lack this claim limitation. *Id*. This argument is misplaced, in that Crampton discloses the use of fixed-position cameras as well. Ex. 1006, 7, 9.

Patent Owner asserts that, in a second embodiment of Crampton employing cameras 63 as the imaging devices, Crampton does not disclose whether the cameras are moved during imaging. Prelim. Resp. 46–47. Patent Owner posits that a person of ordinary skill in the art would have understood that the cameras in this embodiment move as well, and that Crampton's silence on this point further means that it is not legally correct to determine that the cameras are fixed. *Id.* at 48–49. The latter assertion is belied by Crampton, in that, not only does Crampton explicitly state that its device may use a plurality of static cameras, the description of the operation

of the kiosks illustrated in Figure 7 (i.e., number of poses necessary) would inform the person of ordinary skill in the art that those embodiments employ static cameras. Ex. 1006, 9, Fig. 7.

Patent Owner additionally asserts that, even if Crampton does disclose cameras that are fixed in place, Voight teaches away from using imaging devices located at a predetermined distance from a specified imaging point, in that Voigt teaches that a moving camera is to be used in the imaging of the subject. Prelim. Resp. 49. This is similar to an argument presented with respect to the combination of Voigt and Hurley, discussed above. Voigt does not move its camera during imaging-it is vertically adjustable to be set at a height for imaging a particular patient. In any event, Patent Owner does not point to anything in Voigt that criticizes, discredits or otherwise discourages the proposed modification of Voigt.

In a related argument, Patent Owner asserts that modifying Voigt, such that it no longer has a moveable camera, would have impermissibly changed the principle of operation of Voigt. Prelim. Resp. 49. The assertion is misplaced, as we discern that the basic principle of operation of Voigt is imaging the surface of the skin of a person with an imaging device. The provision of a plurality of imaging devices, instead of the single imaging device used in Voigt, appears to obviate the need for the imaging device to be movable.

Patent Owner further asserts that there is no teaching or suggestion in the prior art that Voigt is deficient in any manner, so that a person of ordinary skill in the art would seek to modify Voigt by adding additional cameras. Prelim. Resp. 50. Patent Owner additionally argues that, because Crampton is not concerned with imaging or measuring skin lesions and

melanomas, or even creating an actual image of a person, the person of ordinary skill in the art would have no reason to believe that adding additional cameras would have any benefit in the Voigt system. *Id.* The arguments fail to address the reasons, supported by testimony evidence, advanced by Petitioner as to why a person of ordinary skill in the art would have found it obvious to modify Voigt in the manner asserted, and are, thus, unavailing, at least at this point in time.

Patent Owner further argues that a person of ordinary skill in the art would not have modified Voigt to make that device more costly and complex in view of an alleged lack of any need or benefit for doing so. Prelim. Resp. 51. According to Patent Owner, Crampton stresses reducing the cost and complexity of its kiosks, and, thus, teaches away from the proposed modification to Voigt. *Id.* Again, however, Patent Owner has not challenged the reasons identified by Petitioner as to why a person of ordinary skill in the art would have found obvious the proposed modification, reasoning, at this stage, we determine is adequate and credible. Similarly, Patent Owner does not point to any deficiencies in the reasoning set forth for making the modification.

(d) Reasonable Likelihood of Prevailing on Asserted Ground

For the foregoing reasons, we conclude, on this record, that there is a reasonable likelihood that Petitioner would prevail on the ground that claims 1–4, 8, 11, 30, 33, 34, and 51 are unpatentable over a combination of Voigt and Crampton.

(iv) Claims 1–8, 11, 30, 33, 34, 46, and 51 as Unpatentable over Hurley

Petitioner asserts that these claims would have been obvious over Hurley alone. Pet. 60–75. Petitioner maintains that Hurley discloses most

aspects of the claims, but does not describe the use of a distance from imaging position, and focal length and resolution of the cameras or imaging devices to calculate precise measurements of the imaged features. *Id.* at 64–65. Petitioner also acknowledges that "Hurley seeks accurate surface measurements of three-dimensional, curved surfaces," but that complex calculations are require for such measurements, and "Hurley notes at the conclusion of his article that work was progressing to extract measurements from the three dimensional data sets acquired using his multiple camera system." *Id.* at 66, citing Ex. 1016 ¶ 256.

Petitioner asserts, nonetheless, that the '748 patent acknowledges that its claimed calculations are standard techniques for measurement and analysis of images, and further notes that the field of photogrammetry has long used such parameters to measure features depicted in images. Pet. 64– 65, citing Ex. 1001, 1:7–12; Ex. 1016 ¶¶ 253, 254. According to Petitioner, "not all body dimensions implicate such complex geometries," and, in such situations, "Hurley's invitation to extract measurements from the body data sets would motivate a POSA to use the simpler algorithm described in claim 1 [of the '748 patent] for at least those dimensions suitable to that method." *Id.* at 66, citing Ex. 1016 ¶¶ 256–258."

Patent Owner maintains that Hurley fails to disclose an enclosure that "defines a specified imaging position" for placing a person or portion thereof within the enclosure for imaging, and the specified imaging position defines a centerline, as recited in independent claim 1.⁸ Prelim. Resp. 52–53. As such, according to Patent Owner, other limitations in claim 1 involving

⁸ Independent claim 51 similarly recites a second means located within a first enclosing means for specifying an imaging position, with the second means defining a centerline. Ex. 1001, 25:24–27.

orientations and distances relative to the "specified imaging position" and "centerline" are not disclosed by Hurley. *Id.* Patent Owner additionally asserts that Hurley, in disclosing that extracting measurements from its image data was a work-in-progress, fails to reliably provide a system that "allow[s] precise measurement of imaged features of the person or portion" thereof located at the specified imaging position, as set forth in claim 1. *Id.* at 53.

Looking first at the issue as to whether Hurley discloses an enclosure defining a specified imaging position, Petitioner asserts that this limitation is taught by the disclosure of placing a calibration object approximately where the subject will be standing, and using the calibration object to determine/confirm "the distance between each camera and position that will be occupied by the subject." Pet. 61, citing Ex. 1004, 221. Patent Owner maintains that the use of a calibration object at approximately the position where the subject will stand evidences instead that, in the Hurley device, the subject does not stand at any particular position, and, as such, the enclosure does not define a specified imaging position. Prelim. Resp. 37, 52–53.

Patent Owner has the better position here. Were there a specified imaging position defined by the enclosure, it would seem that a single, initial calibration would be all that would have been required to assure correct coverage, as well as making sure that the subject would be within the depth of focus of each of the sensor heads. *See* Pet. 61–62, citing Ex. 1016 ¶ 245, and quoting Ex. 1004, 221. Repeated use of a calibration object implies that various subjects will assume different positions within the enclosure.

Petitioner presents no evidence or argument that it would have been obvious to modify the Hurley enclosure such that it defines a specified imaging position.

For the foregoing reasons, we determine that Petitioner, on the record before us, has failed to establish a reasonable likelihood that it would prevail in showing that at least one of claims 1–5, 8, 11, 30, 33, 34, 46, and 51 is unpatentable as being obvious over Hurley.

(v) Claims 6 and 7 as Unpatentable over Voigt, Hurley, and Daanen

Petitioner asserts that claims 6 and 7 would have been obvious over Voigt, Hurley, and Daanen. Pet. 76–79. Patent Owner disagrees, asserting that the combination of teachings is flawed for several reasons. Prelim. Resp. 56–59. Claim 6 depends from independent clam 1, and claim 7 depends from claim 6.

(a) Voigt and Hurley

The disclosures of Voigt and Hurley are applied in the same manner as discussed in the foregoing section directed to unpatentability over Voigt and Hurley. Petitioner asserts that Voigt in combination with Hurley fails to disclose the particular placement of multiple sensor arrays recited in claims 6 and 7. Pet. 76–79.

(b) Daanen

Daanen discusses eight (8) commercially available products for performing optical 3D measuring in a manner that produces a digital copy of the surface geometry of the human body. Ex. 1005, 111–120. Each of the systems discussed employ multiple light sources and multiple cameras, and many employ enclosures. Ex. 1016 ¶¶ 69–72. Petitioner relies specifically

on a system termed by Daanen as the Vitronic system. A Petitionerannotated version of Figure 4a of Daanen, illustrating the Vitronic system, is presented below.

(a)



Figure 4a of Daanen above is a substantially schematic perspective view of the Vitronic imaging system discussed in Daanen.

The Vitronic system described in Daanen uses either 16 or 24 CCD cameras. Ex. 1005, 115; Ex. 1016 ¶ 70. The cameras are arranged in four scanning heads, one on each wall of the enclosure. The person stands on a raised block in the center of the enclosure. Each of the four scanning heads includes two lasers to illuminate the body. The cameras in each of the scanning heads are arranged in two, vertically spaced, horizontal rows of three cameras each, with the lasers in a row sandwiched between those rows. Ex. 1005, 115; Ex. 1016 ¶ 70, 89.

(c) Analysis

Based on the information presented in the Petition and Preliminary Response, as well as all supporting evidence, we are persuaded that there is a

reasonable likelihood that Petitioner would prevail in showing that claims 6 and 7 are unpatentable over a combination of Voigt, Hurley, and Daanen. Pet. 76–79; Prelim. Resp. 56–59.

Claim 6 includes all limitations in independent claim 1, and further recites a third imaging array including a plurality of third imaging devices, with the third imaging array being laterally spaced relative to a first imaging array on an opposite side of the first imaging array relative to a second imaging array. Ex. 1001, 22:49–57.

Claim 6 also requires a fourth imaging array including a plurality of fourth imaging devices, with the fourth imaging array being laterally spaced relative to a second imaging array on an opposite side of the second imaging array relative to a first imaging array. Ex. 1001, 22:58–64.

Petitioner employs a differently-annotated version of Figure 4a in Daanen to illustrate its contentions as to how this limitation is met by Daanen, as shown below.



Annotated Figure 4(a) above is a substantially schematic perspective view of the Vitronic imaging system discussed in Daanen.

Petitioner asserts that this Vitronic system has a first imaging array (orange, numeral 1), and a third imaging array (red, numeral 3) disposed laterally to the first imaging array, and in the opposite direction from a second imaging array (purple, numeral 2). Pet. 76, 77. Petitioner additionally asserts that this system has a fourth imaging array (blue, numeral 4) positioned laterally to the second imaging array in a direction opposite to the first imaging array. *Id.* at 77. Petitioner avers that it would have been obvious to modify the device resulting from the modification of Voigt in view of Hurley, in order to have the imaging devices positioned as in the Vitronic device disclosed in Daanen, as a matter of obvious design choice. *Id.*, citing Ex. 1016 ¶¶ 300–312.

Patent Owner maintains that, in the Vitronic system disclosed in Daanen, the imaging arrays/devices are moved to scan the subject, and therefore, if a person of ordinary skill in the art were to consider using the imaging array positioning employed in the Vitronic system, the combination would result in the modified device having moving cameras. Prelim. Resp. 57. According to Patent Owner, this would especially be the case in view of the Voigt system having a vertically movable camera. *Id.* Patent Owner asserts that to use the Vitronic positioning for fixed-position cameras amounts to impermissible picking and choosing of features from the prior art employing hindsight reconstruction. *Id.*

Patent Owner's position is, in effect, that in order to use any of the teachings from the Vitronic system disclosed in Daanen, the person of ordinary skill in the art must bodily incorporate all aspects of the system.

The test for obviousness is not, however, whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (internal citations omitted). Daanen discloses both systems with moving imaging devices and fixed or stationary imaging devices. Ex. 1005, *passim*. Petitioner's expert points out that Daanen discloses that the use of steady mounted cameras, which have no moving components, increase the life cycle of the system and increase patient safety. Ex. 1016 ¶ 69, quoting Ex. 1005, 119. Patent Owner's reference to the Voigt system employing a moving camera as justification for the proposed modification requiring moving imaging devices is misplaced, as discussed *supra*. The Voigt system allows for the height of the camera to be adjusted, but during imaging, the camera remains at a fixed position.

Patent Owner further asserts that, since there is nothing in the prior art that suggests that the coverage provided by Hurley is inadequate, a person of ordinary skill in the art would not seek to further modify the device resulting from modifying Voigt in view of Hurley, to include the imaging array positioning in Daanen. Prelim. Resp. 58. Patent Owner argues that the addition of a further imaging array (Hurley having three, Daanen/Vitronic four) would inject additional cost and complexity, thus, leading the person of ordinary skill in the art to refrain from making the further modification. *Id.* at 58–59.

At this point in the proceeding, we are persuaded that the Muller testimony on this issue is adequate. Ex. $1016 \ \mbox{\P} 73$. Patent Owner will have the opportunity to present counter arguments and evidence during trial.

Petitioner sets forth similar analyses for claim 7, which depends from claim 6. Pet. 78–79. Petitioner as well sets forth a rationale as to why a person of ordinary skill in the art would have found it obvious to modify Voigt in view of Hurley. *Id*.

Patent Owner asserts that nothing in the prior art suggests that the lighting arrangements in Voight and Hurley are deficient or inadequate, such that the person of ordinary skill in the art would seek to further modify the positioning of the lighting in view of Daanen. Prelim. Resp. 59. For the same reasons presented above with respect to claim 7, we are unpersuaded.

(d) Reasonable Likelihood of Prevailing on Asserted Ground

For the foregoing reasons, we conclude, on this record, that there is a reasonable likelihood that Petitioner would prevail on the ground that claims 6 and 7 are unpatentable over a combination of Voigt, Hurley, and Daanen.

(vi) Claims 32 and 46 as Unpatentable over Voigt, Crampton, and Dye

Petitioner asserts that claims 32 and 46 would have been obvious over Voigt, Compton, and Dye. Pet. 80–82. Patent Owner disagrees, relying on arguments presented for independent claim 1. Prelim. Resp. 6. Claim 32 depends from claim 30 and claim 1, and claim 46 depends from claim 1.

(a) Voigt and Crampton

The disclosures of Voigt and Crampton are applied in the same manner as discussed in the foregoing section directed to unpatentability over Voigt and Crampton. Petitioner asserts that Voigt in combination with Crampton fails to specifically disclose the use of a personal digital assistant (PDA) as a display device, as required by claim 32, and the use of a universal serial bus (USB) hub, as required by claim 46. Pet. 80–82.

(b) Dye

Dye discloses a system that includes video display monitors to view two and three-dimensional images, with the candidates for display devices including LCD screens, flat panels, computer monitors, and also personal digital assistants (PDAs). Ex. 1007, 5. Dye additionally discloses that USB ports are a preferred method for connecting a computer to one or more display device for displaying two- and three-dimensional images. *Id.*, Fig. 2B

(c) Analysis

Based on the information presented in the Petition and Preliminary Response, as well as all supporting evidence, we are persuaded that there is a reasonable likelihood that Petitioner would prevail in showing that claims 32 and 46 are unpatentable over a combination of Voigt, Crampton, and Dye. Pet. 76–79; Prelim. Resp. 56–59.

As noted above, claim 32 introduces the limitation that the display device is to be a PDA. Ex. 1001, 24:30–31. Petitioner asserts that both Voight and Crampton employ displays, and that Dye discloses that a display for 2D and 3D images can be a PDA. Pet. 80. Petitioner asserts that it would have involved only a simple and obvious substitution of the Dye PDA for the display of Voigt or Crampton, in that the substitution amounts to using prior art technology for its established function. *Id.*, citing Ex. 1016, ¶¶ 93, 381, 383, 387–389.

As also noted above, claim 46 introduces a limitation that a viewing device includes at least one of a USB hub, an interfacing cable, a computer processor or like processor, a monitor, and a control device. Ex. 1001, 25:8–11. Petitioner asserts that Dye discloses providing a USB port as a preferred

approach for connecting its computer to one or more display devices. Pet.82. Petitioner asserts that incorporating a USB port into the Voigt orCrampton systems would have been an obvious substitution, and the use ofprior art technology for its established function.

(d) Reasonable Likelihood of Prevailing on Asserted Ground

For the foregoing reasons, we conclude, on this record, that there is a reasonable likelihood that Petitioner would prevail on the ground that claims 32 and 46 are unpatentable over a combination of Voigt, Crampton, and Dye.

ORDER

After due consideration of the record before us, and for the foregoing reasons, it is:

ORDERED that pursuant to 35 U.S.C. § 314, an *inter partes* review is hereby instituted as to claims 1–8, 11, 30, 32–34, 46, and 51 of the '748 patent of the following grounds of unpatentability:

A. Claims 1–5, 8, 11, 30, 33, 34, 46, and 51 under 35 U.S.C. § 103(a) as being unpatentable over Voigt and Hurley;

B. Claims 1–4, 8, 88, 30, 33, 34, and 51 under 35 U.S.C. § 103(a) as being unpatentable over Voigt and Crampton;

C. Claims 6 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Voigt, Hurley, and Daanen;

D. Claims 32 and 46 under 35 U.S.C. § 103(a) as being unpatentable over Voigt, Crampton, and Dye;

FURTHER ORDERED that no other grounds are instituted; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(a), *inter partes* review of the '748 Patent is hereby instituted commencing on the

entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R.

§ 42.4, notice is hereby given of the institution of a trial.

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