

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CANFIELD SCIENTIFIC, INC.,
Petitioner,

v.

MELANOSCAN, LLC,
Patent Owner.

Case IPR: 2017-02125
Patent No. 7,359,748

PETITIONER'S REPLY

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I. INTRODUCTION

The Petition established that the challenged claims of the '748 patent are unpatentable on each of the instituted grounds.

The challenged claims are obvious in light of a number of prior art references similarly directed to systems for imaging all or portions of the human body. Systems, such as that disclosed in Voigt, image patients using an imaging device placed at predetermined coordinates. Other references describe the placement of a plurality of such imaging devices around the subject to allow for the capture of additional surface area without having to reposition the subject. The combination of these references to achieve this advantage would have been obvious.

Melanoscan's *Opposition* mischaracterizes the proposed combination and/or the limitations of the challenged claims to argue that the resulting combination would be unworkable or would fail to achieve the claimed advantages of the invention. In support of its arguments, however, Melanoscan unnecessarily incorporates numerous features of secondary references into Voigt's system, or needlessly eliminates existing features from Voigt. Neither is required by the asserted combination. Nor must the asserted combination satisfy limitations not recited in the challenged claims, as Melanoscan contends.

As set forth herein and in the Petition (Paper 1) incorporated by reference, the grounds cited provide a POSA a reason to combine the known elements of the

claims at issue and each claim upon which IPR has been instituted is obvious.

II. THE CHALLENGED CLAIMS ARE OBVIOUS

A. The Claim Constructions of Patent Owner's Expert Are Inconsistent With Applicable Law and Patent Owner's Own Admissions

1. Image / Imaging / Image Device

Melanoscan improperly limits “imaging” to color photography. This is inconsistent with the intrinsic evidence. Ex. 1036 at ¶¶ 5, 13, 25-26, 31, 35, 73, 84-85, 88. Independent claims 1 and 51 speak of “imaging” using “imaging devices” to generate “images.” Claims depending from each of these independent claims make clear that the claimed “imaging devices” may include devices capable of capturing not only human perceptible light, but also temperature emissions, infrared emissions, chemical emissions, electrical emissions, and magnetic emission. *See, e.g.,* claims 12-14, 16-21, 24-29; Ex. 1036 at ¶¶ 5, 26. *Trustees of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1370 (Fed. Cir. 2016)(it is inconsistent to read an independent claim to exclude limitations of a dependent claim).

2. Specified Imaging Position / Second Means / Centerline

Melanoscan proposed that the specified imaging position is “an imaging position that is defined by the enclosure specifically and definitely.” Melanoscan asserts that the ‘748 Patent discloses the means for doing so is a mark placed at the center of the device. Paper 23 at p. 9. As shown in its Petition and in the following pages, the challenged claims are obvious even if this limitation is interpreted to

mean a mark or some equivalent positioning mechanism placed within the enclosure.¹

With respect to the claimed “centerline,” Melanoscan objects to Canfield’s proposed construction but does not offer its own. Melanoscan’s objection has little significance. Melanoscan concedes that Voigt has a centerline. Paper 23 at p. 13. The inventor and Melanoscan’s sole principal, Dr. Rhett Drugge, has likewise conceded that his own system, which is similar in relevant respects to the configuration of the Voigt device, has a similar “centerline.” See Ex. 1039 at 70:7-10; 70:13-71:10; 71:14-15; 71:17-19. (Drugge testimony that the centerline is an imaginary line that cuts through the mid-sagittal line of the body). Ex. 1036 at ¶¶ 100-103. The significance of the “centerline” relates to the claims’ requirement that cameras be positioned on opposite sides of this line to capture different sides of the thing being imaged. *Id.* at ¶ 30. As discussed in the following pages, Melanoscan has admitted that combinations involving Voigt have a centerline, and Canfield has shown that the Ground based upon Hurley alone involves an arrangement of cameras on opposite sides of a line through the specified imaging position.

B. Each of the cited prior art references are analogous art

Melanoscan acknowledges that Voigt is art pertinent to the invention, but improperly argues that a POSA would not apply technology from the body image

¹ Petitioner reserves the right to contest Melanoscan’s construction of this and the other claims in the litigation before the District Court.

capture systems disclosed in Hurley, Crampton, and Daanen. Paper 23 at p. 19, 29, 38-39, 56; Ex. 2019 at ¶ 45.

Melanoscan’s expert, Dr. van der Weide, wrongly suggests that relevant art is limited to prior art references that describe use of color photography to diagnose melanoma and similar skin diseases characterized by discoloration of the skin surface. Ex. 2019 at ¶¶ 64, 73, 90, 93. The invention encompasses devices to image the body—not only systems that capture images of the skin’s surface, but also those focused on imaging the body to measure contours or silhouette. Ex. 1036 at ¶¶ 4-6, 8. The preamble of the independent claims refers to the identification of any malady *that effects* human tissue and is not limited to maladies diagnosed by color changes to the skin. Ex. 1001 at 21:63-64.² The specification offers numerous examples of underlying maladies that effect the shape and outline of the overlying human tissue which the invention was intended to identify. These maladies include skeletal conditions and abscesses which create contour changes in the surface of the body. Ex. 1036 at ¶ 5. In describing “the invention’s scope and intended applications,” the patent discloses a wide range of imaging devices for use in the invention beyond mere color photography and a wide range of uses for the invention. *Id.* at ¶ 5, 13; Ex. 1001 at 5:61-16:29.

² Petitioner does not concede the preamble is a limitation, nor does Melanoscan argue it should be. Nevertheless, the preamble indicates that Dr. Weide’s overly restrictive view is unsupported.

The Supreme Court directs that analogous art should be construed broadly. *Wyers v. MasterLock Co.*, 616 F.3d 1231, 1238 (Fed. Cir. 2010) *citing KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 402 (2007). A reference may be considered if it is within the inventor's field of endeavor, here body imaging. *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992); *In re Shanour*, 600 Fed. Appx. 734, 738 (Fed. Cir. 2015). The scope of the field of endeavor is defined by the explanations of the invention's subject matter in the patent application, including its structure, function, and embodiments. *In re Bigio*, 381 F.3d 1320, 1326 (Fed. Cir. 2004). Melanoscan cites no support for its argument that disclosed intended uses for the invention fall outside the field of endeavor.

Here, each of the identified references is within the inventor's field of imaging the body, such as for health and cosmetic conditions. Ex. 1001 at 1:7-12; Ex. 1036 at ¶ 8, 13. The inventor of the '748 Patent sought to create a scanner to image a greater area of a subject's body than could be efficiently imaged with a single camera and shortening the time necessary to capture the images. Ex. 1036 at ¶¶ 7-8. A reference is also considered relevant, whether or not it is in the same field of endeavor, if it is reasonably pertinent to the problem that the inventor sought to solve. *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). Hurley, Crampton, and Daanen are each directed to methods of scanning or imaging more expansive areas of the body than can be captured with a single camera using multiple cameras and

light sources, and each emphasizes its ability to shorten capture time. Ex. 1036 at ¶¶ 8, 25-26, 35, 84-85, 66. The inventor, Dr. Drugge, testified he looked to these types of body imaging devices in seeking a solution to his problem. Ex. 1036 at ¶¶ 6-11. Because each of these references is at least reasonably pertinent to one of the problems that Dr. Drugge sought to solve, they constitute analogous art.

In addition, during prosecution of the '748 Patent, the patent examiner cited to patents directed to laser imaging, MRI tomography, electromagnetic imaging including laser illumination, 3D imaging, and infrared light capture. Ex. 1036 at ¶ 12. These references describe systems like those disclosed in Hurley, Crampton, and Daanen. Relevant art includes art similar in type to that applied by the examiner during prosecution. *Orthopedic Equipment Co., Inc. v. US*, 702 F.2d 1005, 1008 (Fed. Cir. 1983).

For these reasons, each of Crampton, Hurley, and Daanen constitute analogous art that a POSA seeking to image or scan the body would have considered.

C. The POSA proposed by Melanoscan would not understand the full scope of the invention

Patent Owner's expert, Dr. van der Weide, incorrectly defines the relevant level of skill in the art as "an associate's degree in photography" with two years experience in digital photography and use of computers for collecting, manipulating, and viewing images." Ex. 2019 at ¶ 28. In doing so, Dr. van der Weide disregards the language of the claims and the specification. Because a person trained in

photography would not have experience or knowledge regarding the breadth of the type of imaging described in the patent, Dr. van der Weide's proposed level of ordinary skill in incorrect. Ex. 1036 at ¶¶ 17-23.

The specification of the '748 patent indicates that the patent includes devices "capable of 'taking' the body through traditional photography means, and/or temperature, chemical, or electromagnetic means." Ex. 1001 at 4:26-30; *see also* 1:10-12. At the time of the invention, devices capable of imaging via temperature, chemical or electromagnetic means were very expensive would not have been available to ordinary photographers. Ex. 1036 at ¶ 19.

The patent describes prior art including chemical emulsion extending visual perception to the UV or IR ranges and epiluminescence light microscopy. *Id.* at 2:39-42; 2:48-51. Similarly, the patent describes the use of gathered data to create panoramic mosaics of the body and 3-D models of the body. *Id.* at 3:60-63. Dr. van der Weide's POSA would not be trained with this full range of imaging devices, light sources, and the requirements of 3-D modeling discussed in the patent. Ex. 1036 at ¶¶ 19, 22-23. The individuals involved in the design and development of imaging systems such as the one described in the '748 patent and in publishing papers directed to that subject matter were trained in physics, engineering, or optics not in photography. *Id.* ¶¶ 20-21. For these reasons, Dr. van der Weide's proposed

definition of a POSA is incorrect. However, in this case, the grounds identified render each identified claim obvious under either definition. *Id.* at ¶ 24.

D. Each identified claim of the ‘748 patent is obvious in view of the identified art

1. Voigt and Hurley render the ‘748 patent claims obvious

Melanoscan appears to deliberately misstate the proposed combination of Voigt and Hurley. Melanoscan suggests this combination calls for the unnecessary incorporation of numerous features of Hurley into Voigt’s system, or the needless elimination of existing features from Voigt. Neither is correct.

The Voigt system discloses all limitations of the challenged independent claims with the exception of use of more than one camera. 42, Paper 1 at Section IV.B.1. As acknowledged by Melanoscan, Voigt uses broad spectrum (white, diffuse) illumination (Paper 23 at 20), places a person being imaged at a particular position in the device (*Id.*), fixes a camera to the required vertical height for each patient (*Id.* at 13), records the location of the person being imaged and the position of the camera to ensure reproducible images (*Id.* at p. 16), and uses the resulting image to measure a skin lesion (*Id.* at 13).³ Melanoscan admits that Voigt obtained reproducible imaging by specifying the imaging position of the subject relative to the camera. *Id.* at 16.

³ While Voigt notes that prior art methods had some drawbacks, nothing in Voigt discourages a POSA from photographing the body to screen for melanoma. Muller ¶ 40-41.

A POSA seeking to capture a greater portion of the subject without requiring the subject be repositioned would have been motivated to incorporate Hurley's concept of a plurality of cameras arranged about the subject. Such an arrangement would have been an obvious solution to obtaining greater photographic coverage without inconvenience to the subject or increase in image capture time. Ex. 1036 at ¶ 43.

This combination does not require the physical incorporation of all elements of Hurley into Voigt. Melanoscan's attempts to disparage the combination on that basis are legally unavailing. *See, e.g., In re Mouttet*, 686 F.3d 1322, 1330, 1332-1333 (Fed. Cir. 2012) (obviousness based on multiple references does not require an actual, physical substitution of elements). The proposed combination of Voigt and Hurley need only incorporate Hurley's concept of multiplying the number of Voigt's existing imaging devices and light sources, and locating them around the subject, in order to render the challenged claims obvious.

Thus, Dr. van der Wiede's arguments that Hurley's use of structured illumination would be unsuitable for the Voigt system are irrelevant. Voigt discloses an acceptable means of illumination that could be duplicated for the additional cameras. Ex. 1036 at ¶ 48; Paper 1 at p. 38 (it would have been obvious to a POSA to "replicate Voigt's illumination scheme with respect to additional imaging devices"). Dr. van Weide's assertion that Hurley lacks "a specified imaging position" is

similarly incorrect and irrelevant—Melanoscan acknowledges that Voigt’s position framework already provides this specified imaging position and the combination does not necessitate that it be eliminated. Ex. 1036 at ¶ 27-29, 44-47, 55-56; Paper 23 at p. 33. Dr. van der Weide’s arguments that Hurley lacks structures providing repeatable image registration as present in Voigt are irrelevant given that Voigt has such structures which would be retained in the proposed combination. Ex. 1036 at ¶ 44-47. Dr. Van der Weide’s assertions that Hurley could not provide measurements at the same level of detail as Voigt’s system, or take photographs similar to those of Voigt’s camera are irrelevant. Voigt’s camera is capable of both, and merely multiplying the number of such cameras would not change their method of operation or diminish the detail they can capture. Ex. 1036 at ¶ 25, 31, 36-38, 54.

Similarly, Dr. van der Weide’s arguments that the relatively short time described in Hurley for image capture (approximately 2 seconds) would be unsuitable for use in Voigt ignores the fact that the proposed combination does not require use of Hurley’s “round robin” method of image capture. Multiplying Voigt’s single camera does not preclude the use of near simultaneous image capture. One would not need to import Hurely image capture sequence—a sequence that was specifically adapted to the creation of a whole body 3D model—into Voigt, a system that

captures 2D images for analysis. Ex. 1036 at ¶ 49.⁴ The suitable timing of image capture is simply a matter of design choice, well within the knowledge of one of ordinary skill in the art.

Dr. van der Weide's remaining objections to the proposed combination are premised upon limitations not found within the challenged claims. Melanoscan incorrectly argues that the combination fails to satisfy the limitations of the challenged claims because Voigt's position framework would occlude portions to the subject, preventing the imaging of the subject's entire skin area. None of the challenged claims, however, require the invention to image all of a subject's skin area. Ex. 1036 at ¶¶ 50-53; *see e.g.*, claim 1 "each of said imaging devices generates an image of the illuminated person or portion thereof."

Contrary to Melanoscan's arguments, adding additional cameras having fixed relationships with the imaging position would not render Voigt unsuitable. Ex. 1036 at ¶¶ 45-47; 51, 56, 57. Melanoscan argues that fixing the position of Voigt's adjustable camera would render Voigt unsatisfactory and fundamentally change Voigt. This is incorrect. Ex. 1036 at ¶ 54, 57. As noted by Melanoscan itself, the adjustability of Voigt's single camera is a consequence of the fact that a

⁴ It is also clear that Dr. van der Wiede's concerns with "movement" in the Voigt system are vastly overblown. In a white light system, such as the proposed combination, acquisition time between taking photographs from each CAMERA would not be a concern. Ex. 1036 at ¶ 49. Dr. Drugge testified movement has never been a problem in the covered device. *Id.*

single camera must accommodate patients of various heights. Paper 23 at p. 13.

The addition of cameras serves to expand the area that may be imaged, rendering adjustment unnecessary. The combined “sector fields” of a plurality of vertically arranged cameras would provide the necessary coverage without requiring the adjustability where a single camera is used.

There would be no change in Voigt’s method of analysis of the captured sector field, regardless of whether that sector field is defined by an adjustable camera or multiple fixed cameras. Ex. 1036 ¶ 53, 56. Voigt operates under the principle of fixing the position of the camera at known and reproducible coordinates relative to imaging position. Ex. 1003 at p. 3; Ex. 1036 ¶53, 56. The use of a plurality of fixed cameras, spaced horizontally and vertically, would more readily ensure Voigt’s goals. Ex. 1036 ¶ 53, 56.

Melanoscan argues that Dr. Muller’s proposed possible modifications to Voigt’s positioning system do not derive from the prior art. However, it is sufficient if these arguments are supported by expert testimony and documentary evidence. Paper 23 at p. 32. Here, Dr. Muller provides expert testimony citing to prior art publications and his knowledge as a POSA of ordinary creativity to opine that a POSA would have many means to maintain Voigt’s position framework or an equivalent. Ex. 1016 ¶ 125-127.

Finally, Melanoscan argues incorrectly that Voigt must itself provide a reason to improve itself. Ex. 1036 at ¶ 44. A reason to combine prior art references may be articulated in the references themselves or supported by evidence within the knowledge of a skilled artisan. *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 420 (2007). *Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1322 (Fed. Cir. 2005) (relying on information within POSA’s general knowledge and the nature of the problem to be solved for motivation to combine). As shown in the Petition, each of Hurley, Daanen, and Crampton provide reasons to use the fixed multi-camera formats disclosed in each (for example, to cover the entire body, to increase the life cycle of the scanner, to provide high resolution, optimized to cover the maximum amount of the surface area of a person, to capture the body in a single pose, increase total image information, to accommodate for different heights). *See, e.g.*, Paper 1 at Section IV.A.2, IV.B.2 Ex. 1036 at ¶ 32, 43, 76. Hurley explains that the design of its system is intended to address “the coverage requirements imposed by the shape of the human body,” the ability to “scan a majority of the population” with a relatively short acquisition time while avoiding dynamic issues presented by moving parts. Ex. 1004 at 1-2; Ex. 1036 at ¶ 56-57. Each of these advantages provide a reason to use additional fixed cameras in the Voigt system.

While additional cameras may themselves add costs, a POSA would understand that other time savings and benefits including maintenance savings from using fixed cameras may outweigh such costs. *Allied Erecting v. Genesis Attachments*, 825 F.3d 1373, 1381 (Fed. Cir. 2016) (“[a] given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine” (quoting *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165, 77 USPQ2d 1865, 1870 (Fed Cir. 2006) (citation omitted))); Muller ¶ 43; 57. Further, such an economic consideration would not lead a POSA to believe that the combination would not work. Muller ¶ 43; *Orthopedic Equip.*, 702 F.2d at 1013.⁵

Thus, the combination of Voigt and Hurley renders claims 1-5, 8, 11, 30, 33-34, 46, and 51 obvious.

E. Voigt and Crampton

Melanoscan makes many of the same arguments regarding Crampton’s disclosure as it made in connection with Hurley. As with the combinations addressed

⁵ To the extent that Melanoscan attempts to establish secondary considerations, it fails. The Voigt system, itself, belies Dr. Drugge’s statements that technology did not exist that would allow for repeatable imaging conditions and the provision of the same scale in photographs taken at different times. Voigt discloses both and Dr. Drugge admits that he did not invent those things. Ex. 1036 at ¶¶ 14-16. [REDACTED]

[REDACTED]

above, Voigt provides the use of appropriate lighting and a single camera capable of capturing images to measure skin lesions and Crampton teaches a variety of locations for using multiple cameras and light sources to image the body. Muller ¶58-66.

As with the previous combination, many of Melanoscan's arguments are premised on requiring the importation of elements from Crampton not needed for the combination. Melanoscan's argument that Crampton's avatar does not capture the skin surface features and does not capture colors, is both incorrect and not relevant to the combination because Voigt discloses an appropriate camera. Ex. 1036 at ¶¶ 66-67, 73-74. Crampton's use of color cameras at the top, middle, and bottom of travel to capture the colors of the person would provide sufficient data, but Voigt already discloses a camera capable of doing so. Ex. 2019 at ¶ 73. Similarly, Melanoscan's other concerns regarding the types of cameras (still frame or moving) and light sources (laser illumination, incoherent, nonuniform, or structured light) used by some embodiments of Crampton are not relevant. *Id.* at ¶¶ 62, 70. The combination proposed merely duplicates the cameras and light sources of Voigt. Melanoscan's concern that Crampton does not define coordinates is again incorrect and not relevant. *Id.* at ¶ 71, 72. Voigt provides those elements, to the extent that they are required.

Melanoscan also seeks to incorporate limitations not required by the claims. While Crampton is capable of tracking changes over time, doing so is not required by the claim language and, to the extent it is required, is provided by Voigt. Ex. 1036 at ¶ 68. Melanoscan seeks to require alignment of images. *Id.* at ¶ 69. This is not required by the claims of the ‘748 patent. The absence of all occlusion is not required by the patent claims. *Id.* at ¶ 75.

For the same reasons described in connection with Hurley above, Melanoscan’s argument that using a fixed position camera would render Voigt unsatisfactory is incorrect. Ex. 1036 at ¶¶ 74-75; *supra* at p. 14-15.

Turning to Melanoscan’s specific arguments regarding Crampton, Melanoscan admits that Crampton discloses the use of multiple cameras to capture images of a person, including color images. Paper 23 at p. 40; 42-44. While Melanoscan misunderstands the camera layouts disclosed in Figures 7 and 9 of Crampton, it admits that at least some of those layouts disclose the multiple camera locations required by the claims. *Id.*; Ex. 1036 at ¶¶ 63-65. Although Crampton discloses a variety of camera layouts, Melanoscan improperly seeks to separate out the individual embodiments taught by Crampton. The obviousness analysis must consider the full breadth of Crampton’s teaching, which discloses that body imaging can be done using a wide range of camera locations and either moving or fixed cameras. “The use of patents as references is not limited to what the patentees describe as

their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain.” *In re Heck*, 699 F.2d 1331, 1332-33 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

Turning to reasons to combine Crampton and Voigt, Melanoscan argues that Crampton teaches away from the use of kiosks with multiple cameras and cameras on multiple sides of a person. Crampton merely identifies a preferred embodiment, which does not constitute a teaching away. The mere disclosure of alternative designs, even where such alternatives may be inferior for certain purposes does not teach away from use of the disclosed design. *In re Mouttet*, 686 F.3d 1322, 1334 (Fed. Cir. 2012); *see also Allied Erecting v. Genesis Attachments*, 825 F.3d 1373, 1381 (Fed. Cir. 2016) (“[a] given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.”) Melanoscan does not dispute that Crampton discloses such kiosk layouts. Paper 23 at pp. 40-41; 44. In fact, Crampton describes benefits for different layouts. Muller ¶ 76. Each of these benefits provide a reason to combine Crampton’s disclosed multiple camera layouts with Voigt, some of which “capture a person in a single pose” and others which “increase the amount of total image information captured. *Id.* Melanoscan argues that Crampton’s preference for one kiosk

design⁶ based upon cost would discourage a POSA from using multiple cameras, but a POSA would understand that the time saving benefits of the design outweigh the cost. Ex. 1036 at ¶ 76; *Orthopedic Equip.*, 702 F.2d at 1013 (the fact that a business person might not select a design based on cost is not relevant to the issue of obviousness where the design is functional). Thus, a POSA would be motivated to combine Crampton's explicit disclosure of a variety of multiple camera layouts to image the body with Voigt's imaging system.

For the reasons set forth herein and in the Petition, claims 1-4, 8, 11, 30, 33-34, 46, and 51 are obvious over Voigt in combination with Crampton.

F. Hurley Alone

The Hurley system discloses an enclosure having an arrangement of a plurality of cameras and accompanying lights sources both horizontally and vertically spaced about the positions specified for the subject to be imaged. To the extent Hurley lacks a description of a clearly demarcated imaging position, or certain specific configurations of cameras and light sources recited in various dependent claims, it would have been obvious for a POSA to incorporate these elements into the system disclosed in Hurely. Hurley's system places cameras at fixed coordinates relative to the position of the subject and describes employing the imaging devices to measure the subject precisely. Hurley is directed to the use of such a

⁶ Melanoscan incorrectly states that this preferred kiosk design has only a single camera. Ex. 1036 at ¶¶ 62-65.

system to create custom tailored garments, one of the intended uses articulated in the '748 Patent for the claimed invention.

With respect to the claimed requirement of a specified imaging position, Melanoscan has asserted that the '748 Patent discloses, as the means for defining such an imaging position, a mark placed at the center of the enclosure a predetermined distance from each of the imaging devices. Paper 23 at p. 9. Melanoscan argues that Hurley lacks such a specified imaging position and that it would not have been obvious to have incorporated such a position into Hurley.

As Melanoscan acknowledges, Hurley discloses a calibration procedure in which a calibration object is initially placed at the point in the enclosure where the subject is to stand. Paper 23 at p. 52; Ex. 1036 at ¶¶ 27-29. It would have been obvious to a POSA to provide a visual marker of this location to ensure that the subject positioned themselves at the precise location just calibrated. Ex. 1036 at ¶ 27. The contemporaneous patent filed by the Hurley inventors discloses that they used just such a footprint marking to identify the location where the individual should stand. *Id.* at ¶¶ 27-29. [REDACTED]

[REDACTED]

Melanoscan asserts that the specification of such an imaging position fails to define a centerline. However, the position specified for imaging the subject in Hurley is necessarily one in which the claimed imaging devices are arranged such

that they are located on opposite side of the line defined by the subjects imaging position. As shown in the figures in Hurley, the imaging position ensures that cameras may image both sides of the subject as a consequence of their location on opposite sides of a line defined by that position. The enclosure in Hurley, with its laterally offset towers and opposing front and rear facing imaging devices, discloses at least as much of a centerline as is disclosed by the '748 patent. The use of two towers to capture the front of the body dictates where the individual faces and the single tower defines where the midpoint of the body should be located. Muller ¶ 30.

Contrary to Melanoscan's argument, a POSA would understand that Hurley discloses the ability to make precise measurements. Ex. 1036 at ¶ 36-38. Hurley disclosed its use of a previously existing measurement system known to be well suited for performing body measurement and the range, horizontal (2mm), and vertical (2mm) resolution of the Hurley system was reported in Daanen. *Id.*

Melanoscan's complaint that Canfield employed a narrower construction of the *wherein* clause than employed by Melanoscan is irrelevant. Because Melanoscan's broader definition encompasses Canfield's more narrow reading, Canfield's evidence of the obviousness of this clause is sufficient to satisfy either definition. Muller ¶ 36-38.

With respect to the specific alternative configuration recited in dependent claim 6, Melanoscan appears to argue that Hurley itself must suggest the use of a fourth array. As set forth above, the reason to modify a reference may come from anything in a POSA's knowledge. Hurley explicitly explains that more cameras can be used where additional detail is needed and that in disclosed layout, there is less detail captured of the back. Muller ¶ 32. In any use where detail of the back is needed, a POSA would have a reason to use a fourth array. A POSA's knowledge would also include the disclosures of Daanen and Crampton of the benefits of using of multiple arrays on all sides of the body to increase the total image information or resolution (Ex. 1005 at 11, Ex. 1006 at 5). As set forth with previous combination the mere fact that a design may cost more does not teach away from its use where other benefits and advantages are found.

Thus, Hurley renders each of claims 1-8, 11, 30, 33-34, 46, and 51 obvious over Hurley alone.

G. Voigt, Hurley, and Daanen

Addressing the combination of Voigt, Hurley and Daanen, Melanoscan does not identify a single claim limitation of any of claims 6 and 7 that is not disclosed in the combination of Voigt, Hurley, and Daanen. The Voigt/Hurley combination discloses each limitation of claims 6 and 7 except for the use of a fourth imaging array and related light source. Ex. 1036 at ¶ 77-79; 86. Daanen describes various

body scanning systems including the Hurley system. *Id.* at ¶ 80-83. These systems each include cameras located around the body that capture images. *Id.* at ¶ 84-85, 88. The Vitronic system specifically discloses using cameras located on all four sides of the body. Ex. 1036 at ¶ 86. Daanen further discloses that a variety of layouts including fixed or moving cameras can be used to accomplish a particular system's purpose, where fixed cameras provide for a longer life cycle. *Id.* at ¶ 87, 91.

Melanoscan argues that the moving cameras and laser or patterned light sources of the Daanen system would not be appropriate, but Voigt provides cameras and lights suitable for its purpose. *Supra* at p. 13. With respect to moving cameras v. fixed, Daanen discloses the use of both. Ex. 1036 ¶¶ 86, 91-92.

As discussed above in connection with the Voigt/Hurley combination, nothing in Voigt indicates that occlusion or shadowing would necessarily occur and Voigt does not require the capture of 100% of the body in order to function. A POSA would understand that the use of multiple cameras as disclosed in Daanen would allow for the capture of additional surface area without repositioning even if some occlusion were to occur. Ex. 1036 at ¶ 93. Similarly, the combination does not require 3-D modeling. Ex. 1036 at ¶ 88.

A POSA would understand that Hurley's own disclosure that its use of two towers to capture the front of the body allows for more detail than its use of a single tower to capture the back (which required less detail for purposes of clothing

measurement) would encourage someone seeking to image the back of the body for medical reasons to use an additional array as disclosed in Daanen. Similarly, Daanen's disclosure that the use of the camera layout of Vitronic allows for increased resolution would provide a reason for a POSA to use that design. Ex. 1036 at ¶¶ 89-90. While Melanoscan argues that the Daanen article's focus on 3D resolution is not relevant to Voigt, a POSA would understand that the effect of increased resolution as the result of using multiple cameras as taught by Daanen is also the same for camera resolution. Ex. 1036 at ¶ 90. As discussed above in connection with Crampton, Melanoscan's arguments regarding increased cost and complexity from the use of multiple systems does not clearly outweigh the benefits of time savings resulting from their use. Muller ¶ 44.

Thus, claims 6 and 7 are obvious in view of the combination of Voigt, Hurley, and Daanen.

III. CONCLUSION

Because Canfield has proven that each claim on which institution has been granted is obvious, the Board should find all claims unpatentable.

Respectfully submitted,

October 1, 2018

/ s /

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that, pursuant to 37 CFR §§ 42.6(e), copies of the foregoing “PETITIONER’S REPLY” and Exhibits __ are being served to-day, October 1, by electronic mail on counsel for the Patent Owner and through filing this document through the Patent Trial and Appeal Board End to End System:

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WORD COUNT CERTIFICATE OF COMPLIANCE

The undersigned hereby certifies that the foregoing Petitioner's Reply contains 5,595 words as measured by the word processing software used to prepare the document, in compliance with 37 CFR § 42.24(d).

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