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

CANFIELD SCIENTIFIC, INC.,
Petitioner

v.

MELANOSCAN LLC,
Patent Owner

Case No. IPR2017-02125

Patent No.: 7,359,748

PATENT OWNER'S SUR-REPLY

TABLE OF CONTENTS

	<u>Page</u>
TABLE OF AUTHORITIES	ii
I. INTRODUCTION.....	1
II. THE CHALLENGED CLAIMS ARE PATENTABLE.	1
A. Claim Construction.....	1
1. “Imaging Device”/“Imaging Means”.....	1
2. The Board Should Adopt Melanoscan’s Construction of “Centerline.”	1
B. The Board Should Adopt Melanoscan’s POSA Definition.	3
C. Canfield Fails to Meet Its Burden to Prove That Claims 1-5, 8, 11, 30, 33-34, 46 and 51 Are Unpatentable over Voigt and Hurley.....	5
D. Canfield Fails to Meet Its Burden to Prove That Claims 1-4, 8, 11, 30, 33-34 and 51 Are Unpatentable over Voigt And Crampton.	12
E. Canfield Fails to Meet Its Burden to Prove That Hurley Renders Claims 1-8, 11, 30, 33-34, 46 and 51 Unpatentable.....	18
F. Canfield Fails to Meet Its Burden to Prove That Claims 6-7 Are Unpatentable over Voigt, Hurley and Daanen.	23
III. CONCLUSION.....	25

TABLE OF AUTHORITIES

	Page(s)
FEDERAL CASES	
<i>3rd Eye Surveillance, LLC v. United States</i> , 2018 U.S. Claims LEXIS 1222 (Fed. Cl. Sep. 25, 2018)	1
<i>Allied Erecting</i> , 825 F.3d 1373 (Fed. Cir. 2016)	9, 14
<i>Apple Inc. v. Samsung Elecs. Co.</i> , 839 F.3d 1034 (Fed. Cir. 2016)	12, 18, 25
<i>Ex parte Bagnall</i> , No. 2009-013429, at 11-12 (B.P.A.I. Aug. 15, 2011)	11
<i>DePuy Spine, Inc. v. Metronic Sofamor Danek, Inc.</i> , 567 F.3d 1314 (Fed. Cir. 2009)	13, 14
<i>Forest Labs. Holdings Ltd. v. Mylan Pharms. Inc.</i> , 206 F. Supp. 3d 957 (D. Del. 2016).....	13, 14
<i>Ex parte Gunasekar</i> , No. 2009-008345, at 9-10 (B.P.A.I. Aug. 31, 2011)	11
<i>Hynix Semiconductor Inc. v. Rambus Inc.</i> , 645 F.3d 1336 (Fed. Cir. 2011)	9, 22, 24
<i>Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.</i> , 821 F.3d 1359 (Fed. Cir. 2016)	6, 7
<i>In re Jones</i> , 958 F.2d 347 (Fed. Cir. 1992)	16
<i>KSR Int’l Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007).....	8, 19
<i>Medtronic, Inc. v. Endotach LLC</i> , IPR2014-00100 (P.T.A.B. Apr. 21, 2014).....	22
<i>In re Mouttet</i> , 686 F.3d 1322 (Fed Cir. 2012)	14

<i>Orthopedic Equip. Co. v. United States</i> , F.2d 1005 (Fed. Cir. 1983)	9
<i>Plas-Pak Indus., Inc. v. Sulzer Mixpac AG</i> , 600 Fed. App'x 755 (Fed. Cir. 2015)	7
<i>Proctor & Gamble Co. v. Team Techs., Inc.</i> , 2014 U.S. Dist. LEXIS 119060 (S.D. Ohio July 3, 2014).....	12, 18, 25
<i>In re Ratti</i> , 270 F.2d 810 (C.C.P.A. 1959)	7
<i>W.L. Gore & Assocs., Inc. v. Garlock, Inc.</i> , 721 F.2d 1540 (Fed. Cir. 1983)	3, 19
<i>In re Wright</i> , 999 F.2d 1557 (Fed. Cir. 1993)	3
FEDERAL STATUTES	
35 U.S.C. § 112	3
35 U.S.C. § 312(a)(3).....	22
REGULATIONS	
37 C.F.R. § 42.22(a).....	22
OTHER AUTHORITIES	
Office Patent Trial Practice Guide, August 2018 Update.....	8, 18, 19, 20, 22, 23

I. INTRODUCTION.

Patent Owner (“Melanoscan”) submits this Sur-Reply to Petitioner’s (“Canfield’s”) Reply (Paper No. 33). The Board should hold that Canfield has failed to establish unpatentability of any claims challenged in the Petition (“Pet.”) for the reasons set forth in Melanoscan’s Preliminary Response (Paper No. 11) (“POPR”), its Response (Paper No. 23) (“POR”), and herein.

II. THE CHALLENGED CLAIMS ARE PATENTABLE.

A. Claim Construction.

Melanoscan maintains the claim constructions set forth in the POPR (Section III.D) and POR (Section III.C).

1. “Imaging Device”/“Imaging Means”

Canfield erroneously contends Melanoscan improperly limits “imaging” to color photography. Reply, 2. However, Melanoscan’s discussion of color relates to the contrasts between (1) Voigt and (2) Hurley, Crampton and Daanen, not claim construction. *E.g.*, Ex. 2019 ¶¶ 73, 75, 94; POR, 39.

2. The Board Should Adopt Melanoscan’s Construction of “Centerline.”

Contrary to Canfield’s assertion (Reply, 3), it is entirely appropriate to construe “centerline” per its ordinary and customary meaning. *See 3rd Eye Surveillance, LLC v. United States*, 2018 U.S. Claims LEXIS 1222, at *50-57, 60-

67, 72-77 (Fed. Cl. Sep. 25, 2018) (adopting “plain and ordinary meaning” without further construction).

Canfield’s argument that Dr. Drugge’s testimony supports construing “centerline” as the centerline of a person being imaged is baseless.

Exhibit 1040 (p. 4) shows a photograph of a Melanoscan TIP enclosure with a line drawn by Canfield’s counsel between the enclosure’s footprints and two vertical camera arrays. Drugge testified that the line is “roughly in the position of the centerline.” Ex. 1039, 71:7-19.¹ No person is in the photograph. Exhibit 1040 unambiguously shows the centerline with reference to the structure of the enclosure, namely, extending between the footprints and camera arrays.

Drugge’s other testimony is consistent. He was asked a series of questions assuming that a person would be standing on the footprints. Ex. 1039, 68:5-70:6. In this context, he defined the centerline with reference to both the device and the person standing on the footprints: the centerline “would be the mid sagittal line,” “[b]etween your legs,” and “between the cameras.” Ex. 1039, 70:13-71:2. When a person stands on the footprints, the centerline of the device would be at the mid sagittal line and between the legs of the body. *See* Ex. 1040, 4 (“Anatomical footprint maps attached to the floor demonstrate the correct body positioning...”). However, regardless of whether a person is in the device, Drugge testified that the

¹ Testimony is cited by page:lines format.

centerline is “between the cameras” and thus defined by the device. Ex. 1039, 71:6-19. Canfield artfully did not ask whether the centerline would extend along the mid sagittal line and/or between the legs if a person were not standing on the footprints. Drugge’s testimony and Exhibit 1040 are clear it would not, and are consistent with Melanoscan’s position this limitation’s meaning. Ex. 2019 ¶ 38.

B. The Board Should Adopt Melanoscan’s POSA Definition.

Canfield erroneously contends Melanoscan’s POSA definition is incorrect because it would not understand “the full scope of the invention.” Reply, 6-7. Canfield contends such a POSA lacks the necessary experience/knowledge regarding temperature, chemical and electromagnetic imagers disclosed in the ‘748 patent.

However, a POSA does not need to understand “the full scope of the invention.” That is a 35 U.S.C. § 112 “enablement” standard, *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993), not an obviousness standard. Canfield also ties a POSA’s knowledge and skill to what the ‘748 patent discloses. But a POSA’s knowledge is limited to the time of the invention, and does not include knowledge from the patent-in-suit. *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983) (improper to “imbue one of ordinary skill in the art with knowledge of the invention in suit”).

Canfield's contention cannot be correct also because its own POSA would not understand chemical or electromagnetic imaging. Canfield's POSA could have a degree in photogrammetry, which involves measuring distances using images, Ex. 1016 ¶¶ 7, 35, or optics, which is the study of light. Neither field involves chemical or electromagnetic emissions. Thus, Canfield's own POSA would not understand what it contends Melanoscan's POSA must.

Moreover, the claims in this IPR are directed to generating images using light. The claims recite light sources for illuminating a person and generating refraction and reflectance light therefrom, and generating images of the illuminated person using imaging devices defining "a focal length." Ex. 1001, claims 1, 51. In contrast, chemical and electromagnetic imagers do not have a "focal length," nor use illuminating lights to generate refraction/reflection light. *Id.*, 19:19-21² (light sources unnecessary for chemical imaging). A POSA with an associate's degree in photography *or related disciplines* and two years' experience as Melanoscan proposes would adequately understand the art at the time of the invention directed to generating images of a person illuminated with light as claimed. Ex. 2019 ¶¶ 28-29.

² The '748 patent is cited by column:lines format.

C. Canfield Fails to Meet Its Burden to Prove That Claims 1-5, 8, 11, 30, 33-34, 46 and 51 Are Unpatentable over Voigt and Hurley.

Voigt and Hurley do not render the claims unpatentable because:

- Modifying Voigt's adjustable camera to be a fixed camera would impermissibly render Voigt unsatisfactory for its intended purpose because it would eliminate the adjustability of the camera needed to provide reliable registration repeatability (POPR 42; POR, 21-27);
- So modifying Voigt would also impermissibly change its principle of operation because it would require substantial reconstruction and redesign of Voigt (POPR, 45; POR, 27-28);
- Canfield's rationales for why a POSA would modify Voigt, *i.e.*, to "cover the entire body without repositioning," "avoid [] shadowing or shading effects," and "reduce[] time to scan a whole body," fail. (Pet., 30). A POSA would recognize that Voigt's framework positioning system/sliders would occlude and shadow parts of the body even if it had additional cameras, with repositioning still necessary, so the alleged goals could not be achieved (POR, 30-33).

Canfield argues that fixing Voigt's movable camera would not render Voigt inoperable/unsatisfactory because Voigt's camera is movable to adjust for patient height, and Hurley captures a person's entire height. Reply, 10-11. However,

height adjustment and “reliable registration reproducibility”³ are separate functions. Voigt teaches that camera adjustability is necessary for the latter, and without it, reproducibility cannot be achieved. Exs. 1003, 981-82, 987; 2019 ¶¶ 33-34, 46, 48, 50, 52-56, 60, 66, 80-81; *see also* POR, 21-27. Nothing in Hurley suggests that its fixed cameras can provide the necessary reproducibility – Hurley is directed to a one-time clothing measurement and does not discuss reproducibility. Exs. 1004, 212; 2019 ¶¶ 51, 55, 56, 60-61, 63-64, 66-67, 80, 81, 86. Thus, the invention is not obvious. Ex. 2019 ¶ 60, 61, 67; *see Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1367-68 (Fed. Cir. 2016) (no reasonable expectation of success).

Canfield also contends that fixing Voigt’s camera would not change its principle of operation because “Voigt operates under the principle of fixing the position of the camera,” and Hurley’s cameras would “ensure Voigt’s goals.” Reply, 12. But Voigt does not “fix” the position of the camera. Voigt adjusts the position of the camera for each patient. Ex. 1003, 982. That the camera is not

³ Muller erroneously contends that “‘registration’ refers to the provision of landmarks” for locating a lesion. Ex. 1036 ¶ 46. Muller cites no supporting evidence, and “landmark” appears nowhere in Voigt. Instead, “registration” is the positioning of the patient relative to the camera via the position framework/sliders and adjustable camera. Exs. 1003, 981, 982, 987; 2019 ¶¶ 33-34, 46, 48, 50, 52-56, 60, 66, 80-81.

moving when the image is taken does not mean the camera is “fixed” like Hurley’s.

Moreover, Canfield cites no authority for its proposition that the same “goals” means the same principle of operation. Rather, converting Voigt to a fixed camera like Hurley would require “substantial reconstruction” and “redesign of the elements” of Voigt constituting a change in principle of operation. Ex. 2019 ¶ 67; *see Plas-Pak Indus., Inc. v. Sulzer Mixpac AG*, 600 Fed. App’x 755, 757 (Fed. Cir. 2015); *In re Ratti*, 270 F.2d 810, 813 (C.C.P.A. 1959). For example, as Canfield acknowledges, the camera slider would be completely removed. Ex. 1036 ¶ 57. The alleged combination would also operate in an opposite manner from Voigt: using fixed cameras versus a movable/adjustable one. *See In re Ratti*, 270 F.2d at 813 (invention not obvious where it operated in an opposite manner from prior art).

As for rationale to combine, Canfield improperly asserts new theories: “to capture a greater portion of the subject” and for “obtaining greater photographic coverage.” Reply, 9. That is, Canfield now contends a POSA would seek to capture only part of the body.

Like Canfield’s attempt to inject new prior art into this IPR (*see* Paper No. 19), Canfield’s new, late-raised rationales are prohibited, and should be disregarded. *Intelligent Bio-Sys.*, 821 F.3d at 1369-70 (Board properly disregarded

new rationale in Petitioner’s reply); Office Patent Trial Practice Guide, August 2018 Update (“OPTPG”), at 14-15.

Nevertheless, Canfield’s new rationales fail. Nothing at the time of the invention would lead a POSA to add additional cameras just to capture “more” but not all of the body. Hurley only teaches imaging the entire body. Ex. 1004, 212. Canfield’s new rationales are *ex post* litigation arguments, not rationales existing at the time of the invention. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (cautioning against “*ex post* reasoning”).

Canfield also continues to rely on alleged time and cost savings by using multiple cameras. Reply, 13-14. However, because patient re-positioning would be necessary due to occlusion/shadowing by the positon framework, such alleged savings are non-existent. Ex. 2019 ¶¶ 33, 50-51, 56-58, 65, 90-94; POR, 30-31.

This also applies to Canfield’s maintenance rationale. Reply, p. 14. Here, Canfield continues to improperly rely on Daanen, which is not asserted under this Ground, and the Board should disregard Canfield’s proffered testimony/arguments. Moreover, Daanen is off-point. Its discussion of fixed cameras’ increased “life cycle” was in comparison to cameras that - unlike Voigt’s - move during imaging. Ex. 2019 ¶ 91; *see* Ex. 1005, 119; POR, 37.

At a minimum, the costs of multiple cameras over a single camera would outweigh any alleged offsetting costs, and so a POSA would not make the alleged

modifications. Ex. 2019 ¶ 61; *Hynix Semiconductor Inc. v. Rambus Inc.*, 645 F.3d 1336, 1353 (Fed. Cir. 2011) (increased cost supported nonobviousness). Canfield's citations do not hold otherwise. *Allied Erecting* and *Medichem* did not address costs. In *Orthopedic Equip. Co. v. United States*, the sole basis for nonobviousness was economic infeasibility. 702 F.2d 1005, 1012-13 (Fed. Cir. 1983). That is not the situation here.

Canfield concedes that additional cameras would cost more.⁴ Reply, 14. Canfield merely contends that other savings “*may* outweigh” those costs. Canfield's use of “may” shows that it is speculating regarding costs and savings. Speculation is not evidence, nor can it be grounds to render a claim unpatentable, especially in view of the evidence otherwise.

A POSA would not modify Voigt per Hurley also because Hurley's “round-robin” acquisition of images, which takes about 2 seconds, while suitable for clothing, would be unsuitable for capturing skin images to detect/measure skin lesions as in Voigt. Ex. 2019 ¶ 66; *see also* POR, 20-21, 30. Canfield responds that a POSA would not consider Hurley's two-second acquisition time “problematic.” Ex. 1036, ¶ 46. However, Muller provides no basis for his opinion. In contrast, Dr. van der Weide provides detailed explanations why a POSA would consider it problematic. Ex. 2019 ¶ 66 (*e.g.*, differences between

⁴ Crampton confirms this. Ex. 1006, 9-10, 13; 2019 ¶ 78; POR, 40-41.

“the scale and precision required for assessing skin lesions” and for clothing). Muller also misrepresents Drugge’s testimony as supporting his contentions. To the contrary, Drugge testified about [REDACTED]

[REDACTED] Ex. 1039, 57:16-21; 58:4-10; 60:5-61:15; 62:7-8; 63:3-7; 137:15-17; 162:17-23; 172:24-173:2; 196:13-194:4; 197:14-198:5; 198:25-199:12; 199:22-200:19; 201:11-202:3. Muller’s conclusory assertions are further belied by Voigt’s positioning framework/sliders, whose purpose is to prevent patient movement (to ensure proper registration). Exs. 1003, 981-82, 987; 2019 ¶¶ 57, 74.

Canfield alternatively contends that a POSA would select any “suitable” image capture time, such as “near-simultaneity,” as a “design choice.” Reply 9-10. This is incorrect. Nothing at the time of the invention suggests this. A POSA would understand that, with multiple cameras, there must be a timing-scheme among the cameras for image acquisition. The only multiple-camera timing-scheme in the relied-upon art is Hurley’s “round-robin” scheme. Exs. 1003, 214; 2019 ¶ 66. As no alternative is suggested, a POSA would use Hurley’s scheme. Ex. 2019 ¶ 66.

A POSA would not seek to modify that scheme, much less make it near-simultaneous. Again, nothing in the prior art suggests doing so or the benefits

thereof. In contrast, Hurley expressly uses its round-robin scheme “to minimize capture time.” Ex. 1004, 214. A POSA would understand that Hurley already minimizes capture time, and thus would not seek further reduction. Ex. 2019 ¶ 66.

Additionally, “design choice” applies only when the alleged modification is “recognized as functionally equivalent” to the prior art and the “prior art would have performed equally as well.” *Ex parte Gunasekar*, No. 2009-008345, at 9-10 (B.P.A.I. Aug. 31, 2011). As discussed above, Drugge and van der Weide testified that Hurley’s scheme would be unsuitable for cancer analysis in Voigt, and thus capture timing cannot be a mere design choice. *See id*; *Ex parte Bagnall*, No. 2009-013429, at 11-12 (B.P.A.I. Aug. 15, 2011) (“[O]bvious design choice is precluded” because prior art performed differently).

Canfield additionally contends that Melanoscan argues that Hurley is non-analogous art. Reply, 3-4. Melanoscan did not. Rather, Melanoscan described the significant differences between Hurley and Voigt. Voigt generates color photographs to detect/measure skin cancers. Ex. 1003. It uses halogen lights to illuminate the patient. *Id.*, 928; Ex. 2019 ¶ 53. Hurley generates a body outline or avatar for clothing measurements. Exs. 1004, 212-14, FIGS. 2.1, 2.2, 5.1, 5.2; 2019 ¶¶ 65, 72. It uses projectors to partially illuminate the person with different light grating patterns in sequence, which a POSA would understand is not suitable for analyzing skin lesions. Exs. 1004, 212-14, FIGS. 2.1, 2.2; 2019 ¶¶ 64-66.

These differences reinforce that a POSA would not make the alleged combination. Ex. 2019 ¶¶ 45, 64, 65, 67, 71-73, 76; *see Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1051-52, n.14 (Fed. Cir. 2016) (though analogous art, references were sufficiently different so that “a skilled artisan would not have been motivated to combine [them]”); *Proctor & Gamble Co. v. Team Techs., Inc.*, 2014 U.S. Dist. LEXIS 119060, at *79 (S.D. Ohio July 3, 2014) (even if analogous, a POSA would not have combined the references due to their differences).

D. Canfield Fails to Meet Its Burden to Prove That Claims 1-4, 8, 11, 30, 33-34 and 51 Are Unpatentable over Voigt And Crampton.

Voigt and Crampton do not render the claims unpatentable because:

- Fixed cameras would render Voigt unsatisfactory for its intended purpose and change its principle of operation for the same reasons as with Canfield’s Voigt/Hurley combination (POPR, 49; POR, 45-47);
- Canfield’s rationales to modify Voigt, *i.e.*, capturing the body in a single pose and cost/time savings (Pet. 53), fail for the same reasons they do regarding Voigt/Hurley. Further, Crampton teaches that Canfield’s alleged cost and maintenance savings did not exist at the time of the invention. (POR, 47-50).

As for fixing Voigt’s camera, Canfield contends this would not render Voigt unsatisfactory for the same reasons as it would not do so in Voigt/Hurley. Reply, 16. However, for the same reasons set forth *supra* at 5-6, this is not correct.

Furthermore, Canfield's rationales for adding more cameras to Voigt are invalid. Canfield contends that a POSA would be motivated by cost savings (Reply 17-18), but no such savings existed at the time of the invention because Crampton teaches the opposite. Crampton expressly teaches that additional cameras increase costs and maintenance due to "high manufacture, transport, installation, and space rental costs as well as a lower degree of reliability." Ex. 1006, 9-10. Crampton therefore repeatedly encourages using only one camera as having "the lowest ... costs as well as a higher degree of reliability." *Id.* In view of Crampton's cost criticisms of additional cameras and disclosure of a lower cost, higher reliability alternative, a POSA would not modify Voigt to include additional cameras. Ex. 2019 ¶ 78; *see DePuy Spine, Inc. v. Metronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009); *Forest Labs. Holdings Ltd. v. Mylan Pharms. Inc.*, 206 F. Supp. 3d 957, 1000-04 (D. Del. 2016); *see also* POPR, 47, 51-52; POR, 40-41, 49.

Canfield replies that Crampton's single-camera kiosks are merely preferred embodiments that do not teach away from using multiple cameras. Reply, 17. But Crampton goes far beyond merely indicating a general preference for one embodiment over another. It expressly criticizes, discredits and discourages Canfield's rationales. A POSA would thus not make the alleged modification. Ex.

2019 ¶ 78; *see DePuy Spine*, 567 F.3d at 1327; *Forest Labs.*, 206 F. Supp. 3d at 1000–04.

The cases Canfield cites are inapposite. In *In re Mouttet*, the prior art merely expressed the advantages of one embodiment over another but did not engage in active criticism like Crampton. *See* 686 F.3d 1322, 1333–34 (Fed Cir. 2012). In *Allied Erecting*, unlike here, the prior art questioned use of an element not present in the alleged combination. 825 F.3d 1373, 1382 (Fed. Cir. 2016).

Canfield also contends Crampton teaches other benefits to multiple cameras, *i.e.*, “optimize the maximum amount of surface area of the person,” “capture a person in a single pose,” and “increase the amount of total image information captured,”⁵ and thus save time imaging the body. Reply, 17–18. Crampton does not support Canfield’s position.

As for maximizing surface area, Crampton refers to the *positions* of the sensors, not their number. Ex. 1006, 14 (“The positions of the four sets of sensors ... can be optimized to recover the maximum amount of the surface area of the person”). With respect to increasing image information, Crampton quickly points out the “cost and reliability” drawbacks thereof and urges a single camera. Ex. 1006, 9–10.

⁵ Canfield presents these as quotations from Crampton, but they misquote Crampton.

Regarding capturing a person in a single pose, Crampton nowhere states this is beneficial, but, as discussed above, unequivocally criticizes such for having high costs and lower reliability. *Id.* Moreover, as with Voigt/Hurley (*supra* p. 8), a POSA would understand that, due to the occlusion/shadowing of the body by the position framework, one could not capture a person in a single pose, even with multiple cameras. Ex. 2019 ¶ 82. Repositioning of the person would still be necessary. *Id.* Such repositioning means that there would be no time savings as Canfield contends. *Id.* Therefore, a POSA would not add more cameras to Voigt. Ex. 2019 ¶¶ 78-82.

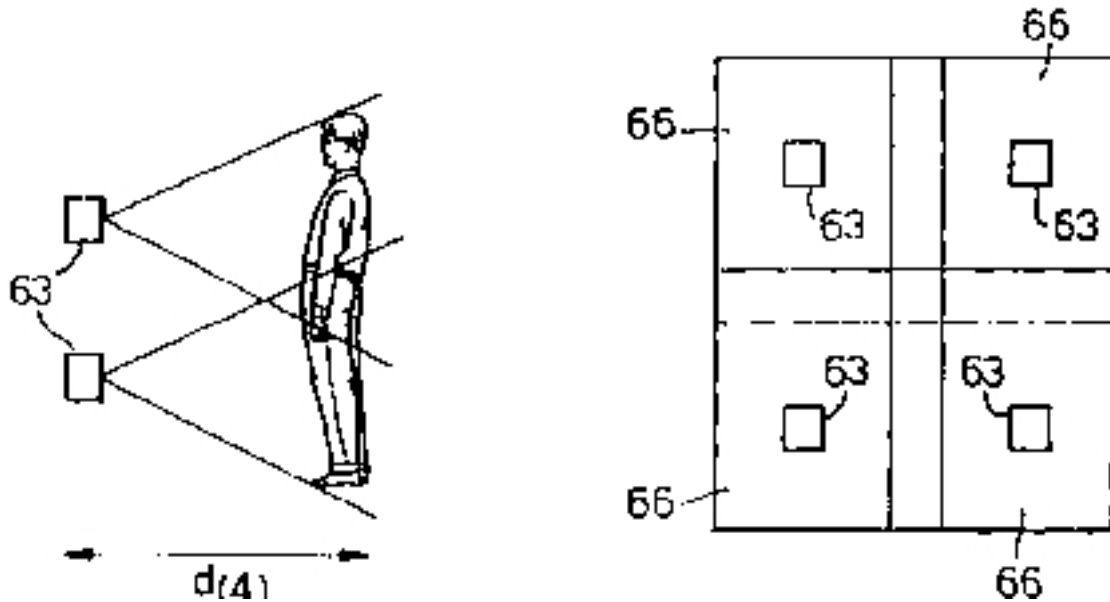
Canfield contends the claims are obvious also because Crampton teaches imaging “using a wide range of camera locations” and “the proposed combination merely duplicates the cameras and light sources of Voigt.” Reply, 15-16. Canfield ignores the claimed arrangements of imaging and lighting devices, *inter alia*, imaging devices vertically spaced, laterally spaced, and on opposite sides of the centerline relative to each other, and light sources peripheral thereto. Ex. 1001, claim 1. Canfield must show that the particular claimed structure is obvious, not merely that one would “duplicate” Voigt’s camera and lights. Regardless, duplicating Voigt’s adjustable camera, whose distance and coordinates relative to the position framework vary as the camera is moved, would not provide the claimed imaging devices that each are “located a predetermined distance relative to

the specified imaging position ... [and] defines respective coordinates and said respective predetermined distance relative to the specified imaging position.” *Id.*; *see* POPR, 38.

As for Crampton teaching “using a wide range of camera locations,” Canfield cites no evidence that Crampton teaches such, and Melanoscan disagrees. *See* Ex. 2019 ¶ 72, 76, 78-79. Even if it did, that would not make the particular claimed structure obvious. *See In re Jones*, 958 F.2d 347, 350 (Fed. Cir. 1992) (broad disclosure did not render the claims obvious).

Canfield further contends that “Melanoscan improperly seeks to separate out the individual embodiments taught by Crampton.” Reply, 16. Canfield’s only allegation, though, is that Melanoscan disregards that Crampton’s FIG. 9 discloses camera arrangements for the kiosks of FIG. 7. However, nothing in Crampton links FIG. 9 to FIG. 7. *See* Exs. 1006, 13; 2019 ¶ 78 (“There is no indication to a POSA that the embodiments in Fig. 7 have more cameras than those expressly depicted”). FIG. 7 labels kiosks 60, 61 and 62. FIG. 9 does not label its embodiments with 60, 61 or 62, demonstrating they are different embodiments.

A comparison of FIGS. 7 and 9 confirms this. The only embodiment in FIG. 9 having cameras on opposite sides of a centerline is the third embodiment. *See* Exs. 1006, FIG. 9; 2019 ¶ 79; POR, 42-44.



It is clear that this embodiment does not relate to any kiosk in FIG. 7. Kiosks 60 and 61 do not have horizontally spaced cameras on one wall 66 as in the above embodiment. Ex. 1006, FIG. 7. In kiosk 62, the cameras are in the corners or at the edges of the walls. *Id.* The cameras in the above embodiment are not – they are spaced well-inwardly from the edges. The embodiments of FIG. 9 clearly do not relate to the kiosks of FIG. 7, and a POSA would understand that. Ex. 2019 ¶ 78-79.

Canfield contends here too that Melanoscan argues that Crampton is non-analogous art. Reply, 2-3. Again, this is not the case. Like with Hurley, Melanoscan describes the differences between the prior art. Crampton, like Hurley, generates an avatar, not images for cancer detection/measurement. Exs. 1006, 1, 4; 2019 ¶¶ 70,72. Many of Crampton's embodiments use laser stripes or other structured lighting to partially illuminate the person, and moving cameras,

which a POSA would understand are not suitable for analyzing skin lesions. Exs. 1006, 7; 2019 ¶¶ 71-73, 76-77. As with Hurley, these differences reinforce that a POSA would not make the alleged combination. Ex. 2019 ¶¶ 71-73, 76; *see Apple*, 839 F.3d at 1051-52; *Proctor & Gamble*, 2014 U.S. Dist. LEXIS 119060, at *79.

E. Canfield Fails to Meet Its Burden to Prove That Hurley Renders Claims 1-8, 11, 30, 33-34, 46 and 51 Unpatentable.

Hurley does not render the claims unpatentable because:

- Hurley lacks the claimed “specified imaging position,” and all limitations based thereon (POPR, 52-54; POR, 50-52);
- Hurley does not “allow[] precise measurements” as claimed (POPR, 53; POR, 53-54);
- For claim 6, no valid rationale would lead a POSA to add a fourth array to Hurley (POPR, 55-56; POR, 54-55).

Canfield improperly relies on U.S. Patent 6,373,963 (“Demers”) as evidence that Hurley has a specified imaging position.⁶ Ex. 1036 ¶¶ 28, 46, 55. The Board should reject Canfield’s attempt to assert a new ground of rejection (the combination of Hurley and Demers) and theories of unpatentability to bolster its Petition. *See* Papers No. 21, 40; OPTPG, 14-15.

⁶ Canfield’s basis for same is that Demers is “contemporaneous” with Hurley. Ex. 1036 ¶ 28. It is not. Demers was filed well after Hurley published and does not refer to Hurley, and thus teaches nothing about what Hurley possessed in 1997.

Canfield alternatively contends it would be obvious to provide Hurley with a “visual marker” at the location where the calibration object was placed during calibration so that one would position oneself “at the precise location just calibrated.” Reply, 19. This new theory/argument of unpatentability does not appear in the Petition and should be disregarded. OPTPG, 14-15.

Canfield’s new theories nevertheless fail. Hurley nowhere suggests placing the person “at the precise location just calibrated” or using a “visual marker” to do so. A POSA would see no need or benefit, because Hurley teaches that a person anywhere within the “sensing area” and “depth of focus” can be imaged. Exs. 1004, 221; 2019 ¶ 86; *see KSR*, 550 U.S. at 419 (obviousness requires a reason to modify).

Canfield further argues a POSA would do so because Drugge testified that

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Ex. 1004, 221. Nor would a POSA, as Canfield contends, compare Hurley and the TIP. The latter is not prior art (Canfield does not contend it is), so a POSA would have no knowledge of it. *W.L. Gore*, 721 F.2d at 1553.

Canfield presents several theories that Hurley has a “centerline.” Reply, 19-20. Canfield first contends it is any “line defined by the subjects [sic] imaging position” about which the cameras are “are located on opposite sides.” This is merely a rehash of Canfield’s debunked contention that the specified imaging position is wherever the person stands and the centerline is defined by the person. Ex. 2019 ¶¶ 38, 67, 86; POPR, 27-29, 37-40; POR 9. Such “line” cannot be the claimed “centerline” because such is defined by the *enclosure’s* specified imaging position, not the subject’s position. *Id.*; Ex. 1001, claim 1.

Canfield alternatively contends that Hurley’s towers and cameras define a centerline, where the single rear tower “defines where the midpoint of the body should be located.” This theory of unpatentability was not presented in the Petition and should be disregarded. OPTPG, 14-15. It nevertheless fails because the specified imaging position, not the imaging devices, defines the centerline. Ex. 1001, claim 1. The towers and cameras cannot be a specified imaging position also because the claims recite that the person is “located at the specified imaging position[/second means]” during imaging. *Id.* In Hurley, the person does not stand at the towers or the cameras during imaging, nor does Canfield contend such. Further, Hurley nowhere suggests that where one stands is specified by the rear tower. Rather, one can stand anywhere within Hurley’s “sensing area” and “depth of focus.” Exs. 1004, 221; 2019 ¶ 67.

Despite Hurley’s own teaching that work “to extract measurements” from collected data was merely “progressing,” Ex. 1004, 223, Canfield contends a POSA would understand that Hurley is able to make “precise measurements” as claimed. Reply, 20. Canfield relies on Daanen, which allegedly teaches that Hurley has a “resolution” of 2 mm. Ex. 1036, ¶ 38.

The Board should disregard this argument because Daanen is not asserted in this Ground. Further, Daanen is irrelevant as to what Hurley teaches because Daanen does not discuss Hurley, but a different reference. Exs. 1005, 115; 2019 ¶ 91. Also, in Daanen, “resolution” refers to the size of a data point, *e.g.*, pixels, not accuracy.⁷ Ex. 1005, 114 (“horizontal resolution is mainly determined by the resolution of the CCD chip in the camera”).

Muller further contends that, because phased-light systems were previously-known, and Hurley describes how it produces silhouettes therewith, a POSA would understand that “measurements between points [on the silhouettes] ... could be made.” Ex. 1036 ¶ 37. But in view of Hurley’s conspicuous failure to publish results, which Dr. Muller fails to address, a POSA would have no reasonable expectation that the silhouette accurately represents the person so that accurate clothing measurements could be made. Ex. 2019 ¶¶ 68, 88.

⁷ Regardless, a 2 mm resolution is too large for the “millimeter-scale” precision required for measuring skin-lesions. *See* Ex. 2019 ¶¶ 68, 70, 75, 83.

For claim 6, Canfield maintains that a POSA would add a fourth camera array to Hurley to obtain greater detail of the person's back. Reply, 21. But a POSA would not do so because Hurley teaches that more "detail" is not needed there, Ex. 1004, 212, and this un-needed array would increase costs and reduce reliability. Ex. 2019 ¶¶ 61, 67, 86-87, 90; *see Hynix Semiconductor*, 645 F.3d at 1353.

Canfield alternatively contends a POSA would add a fourth array in view of other art "[with]in a POSA's knowledge," including Daanen and Crampton. Reply, 21. Canfield again improperly asserts new Grounds and theories of unpatentability, *i.e.*, the combinations of (1) Hurley and Daanen (without Voigt) and (2) Hurley and Crampton. This Ground is based solely on Hurley, and the Petition asserts a POSA would be motivated to add an array only "by the teachings of Hurley." Pet., 71. The Board should disregard Canfield's new arguments. *See Medtronic, Inc. v. Endotach LLC*, IPR2014-00100, Paper 18, at 4 (P.T.A.B. Apr. 21, 2014); OPTPG, 14-15.^{8,9}

⁸ Canfield's broader contention that a petitioner can, after filing its petition, argue new grounds and theories using any art within a POSA's knowledge is clearly wrong. *See id.*; 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.22(a).

⁹ On the merits, a POSA would not add more arrays to Hurley in view of Daanen or Crampton. *See* Sections II.E, II.G.

F. Canfield Fails to Meet Its Burden to Prove That Claims 6-7 Are Unpatentable over Voigt, Hurley and Daanen.

Voigt/Hurley/Daanen do not render the claims unpatentable because, as with Ground 3 (*see supra* p. 22), adding a fourth array to Voigt/Hurley would provide no additional coverage of the body, nor mitigate the occlusion/shadowing by Voigt's position framework, yet would cost more with less reliability. (POPR, 58-59, POR, 58-60).

Canfield admits that no fixed-camera systems in Daanen meet claim 6, but asserts a POSA would add additional cameras because Daanen teaches that such systems can have as many cameras as “necessary to accomplish the systems [sic] proposed purpose.” Ex. 1036 ¶ 91. But Daanen is silent as to how many cameras are needed, or that adding cameras would improve Voigt/Hurley.¹⁰ Exs. 2019 ¶¶ 92, 94-95; 1005.

Additionally, as with other Grounds, Canfield's Reply shifts rationales for modifying Voigt/Hurley from “imag[ing] the entire body in a single pose” and “achiev[ing] total body coverage,” Pet., 77; Ex. 1016 ¶ 301, to merely “captur[ing] additional surface area without repositioning,” Reply, 22. The Board should disregard Canfield's impermissible new theories/rationales. OPTPG, 14-15. In any event, they fail. Hurley already images around the person's entire

¹⁰ Daanen's discussion of the number of cameras in the Vitronic system is inapposite because the Vitronic's moving cameras capture only a thin illuminated stripe of the person at one time. Exs. 1004, 214; 2019 ¶¶ 91-92, 94-95.

circumference. A fourth array would capture no additional surface area. Conversely, Voigt's position framework would occlude/shadow parts of the body, so repositioning would still be necessary. Ex. 2019 ¶ 90.

As repositioning would still be necessary, Canfield's further rationales of time and cost savings (Reply, 22) would not exist. *Id.* Nor would Canfield's alleged maintenance savings. *Id.* As Crampton teaches, adding 33% more cameras to Voigt/Hurley would increase the chance of failure and cost. *Id.*; Ex. 1006, 9-10. A POSA would not add cost to Voigt/Hurley when no benefit exists. *Id.*; see *Hynix Semiconductor*, 645 F.3d at 1353.

Canfield also argues, like Ground 3, that a POSA would add a fourth array to Voigt/Hurley to capture more detail in the back as (allegedly) taught by Hurley. Reply, 21-22. However, as discussed above (p. 22), Hurley nowhere suggests more detail is needed in the back. It says the opposite. Ex. 1004, 212.

Canfield alternatively contends that a POSA would add a fourth array even though Hurley teaches none is needed because Hurley relates only to clothing, not medical systems.¹¹ Reply, 22. However, nothing in Daanen suggests that any of

¹¹ Canfield's argument contradicts Ground 1 where Hurley's clothing purposes supposedly would make no difference to a POSA. Reply, 10. Canfield's inconsistency shows the fallacy of its Hurley-based challenges. Nonetheless, Melanoscan agrees with Canfield that a POSA would not follow Hurley's teachings because it relates only to clothing, not medical systems as in Voigt. Ex. 2019 ¶¶ 65-66, 88.

its six systems lacking a fourth array are unsuitable for medical applications. To the contrary, Daanen expressly states that the Turing and Cyberware systems are useful for medical applications. Ex. 1005, 118, 120. Moreover, Voigt adequately images the back with a single camera. Exs. 1003, 983, FIGS. 2-3; 2019 ¶¶ 61, 67, 86-87.

Canfield also contends that Melanoscan argues Daanen is non-analogous art. Reply, 2-3. Once more, Canfield is incorrect. Rather, as with Hurley and Crampton, Melanoscan described the significant differences between Daanen and Voigt. Like Hurley and Crampton, Daanen generates an avatar. Exs. 1005; 2019 ¶¶ 90-94. The Vitronic system in Daanen relied on by Canfield uses laser-stripe illumination and moving cameras unsuitable for analyzing skin lesions. *Id.* These differences over Voigt simply reinforce that a POSA would not make the alleged combination. Ex. 2019 ¶¶ 92, 94-95; *see Apple*, 839 F.3d at 1051-52; *Proctor & Gamble*, 2014 U.S. Dist. LEXIS 119060, at *79.

III. CONCLUSION

The Board should uphold the patentability of all claims.¹²

¹² For Canfield's Ground 5, the challenged claims are patentable as set forth in the POPR (Section IV.I) and POR (Section III.H).

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

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Patent Owner's Response totals 5594, which is less than the 5,600 allowed under 37 C.F.R. § 42.24(c)(1) and the Office Patent Trial Practice Guide, August 2018 Update (p. 6).

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CERTIFICATE OF SERVICE

I certify that on this 31st day of October, 2018, a true and correct copy of the foregoing Patent Owner's Preliminary Response and its Exhibits, including this Certificate of Service, has been caused to be served in its entirety via electronic mail on counsel of record for Petitioner as set forth below, and through filing this document through the Patent Trial and Appeal Board End to End System:

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