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Paper 9
Entered: June 27, 2022

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CARTESSA AESTHETICS, LLC,
Petitioner,

v.

SERENDIA, LLC,
Patent Owner.

IPR2022-00376
Patent 9,775,774 B2

Before SHERIDAN K. SNEDDEN, CARL M. DEFRANCO, and TINA E. HULSE, *Administrative Patent Judges*.

DEFRANCO, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

Serendia, LLC ("Serendia") is the owner of U.S. Patent No. 9,775,774 B2 (Ex. 1001, "the '774 patent").[1] Cartessa Aesthetics, LLC ("Cartessa")

[1] Serendia identifies SynKloud Technologies, LLC as having the exclusive right to assert the '774 patent. *See* Paper 4.

filed a Petition requesting *inter partes* review of claims 1–7 and 9–19 of the '774 patent.[2] Paper 1 ("Pet."). Serendia filed a Preliminary Response. Paper 8 ("Prelim. Resp."). Because Cartessa's Petition fails to demonstrate a reasonable likelihood that any of the challenged claims are unpatentable, we deny institution of *inter partes* review. *See* 35 U.S.C. § 314(a) (2018).

I. BACKGROUND

A. Related Matters

Also pending before the Office are petitions filed by Cartessa for *inter partes* review of two related patents, namely, U.S. Patent Nos. 10,869,812 B2 (IPR2022-00377) and 9,320,536 B2 (IPR2022-00378). Pet. 2. Those patents, along with the '774 patent at issue here, are the subject of an infringement action filed August 6, 2021[3] in *SynKloud Techs., LLC v. Cartessa Aesthetics, LLC*, No. 2:21-cv-04423 (E.D.N.Y.) ("New York action"). *See id.*; *see also* Paper 4 (Patent Owner Mandatory Notice). According to the district court's docket, that action has been stayed pending the outcome of our review of Cartessa's Petition here and in the related proceedings.

The '774 patent is also the subject of an infringement action in *SynKloud Techs., LLC v. Sung Hwan E&B Co., Ltd.*, No. 6:21-cv-00811 (W.D. Tex.) ("Texas action"), which appears to have been filed the same day as the New York action. Paper 4. We are not apprised of the status of the Texas action.

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[2] Cartessa identifies Sung Hwan E&B Co., Ltd. as also being a real party-in-interest. *See* Pet. 2.

[3] The original complaint did not assert the '774 patent, but the complaint was later amended to do so on November 3, 2021. Pet. 2 n.1.

B. The '774 Patent

The '774 patent is directed to an apparatus and method "used in treating dermatological tissue." Ex. 1001, 1:30–32. As described and shown in the '774 patent, the "dermatological treatment apparatus" comprises "a user handle 220 coupled to an acupuncture plate 200." *Id.* at 2:60–64, Figs. 1A, 1B. The acupuncture plate includes "a plurality of acupuncture pins or needles 230." *Id*. at 3:3–9, Figs. 1B, 1C. In operation, a user employs the apparatus "to create a plurality of micro-wounds or holes in dermatological layers of a mammal's . . . skin or dermis." *Id.* at 3:32–34. Creating such micro-wounds or holes in the skin "may improve the absorption or application of one or more chemicals applied on or about the micro-wounds or holes" (*id.* at 3:34–37) and "may increase cellular activity and help heal tissue faster and facilitate the delivery, uptake and use in the cell of the cosmetics, medications, or chemicals [] used" (*id.* at 8:5–8).

To assist in creating the micro-wounds or holes in the skin, "electrical signal generation system 300 may be electrically coupled to the acupuncture apparatus 320 via one or more wires 300A and to a mammal 20 to be treated via one or more wires 300B" so as to "generate a variety of signals . . . to vibrate one or more pins 351 electrically coupled to the system 300." *Id*. at 3:41–60, Figs. 2A–2C. In addition, the dermatological treatment apparatus may include "a disposable needle module 924 . . . to be removed and disposed after one or more treatments or for each patient, client, or user." *Id.* at 9:47–51, Figs. 9C–9D, 10A–10D.

C. The Sole Challenge

Claims Challenged	35 U.S.C. §	Basis
1–7, 9–19	103	Morris[4] and Pearson[5]

In further support of this challenge, Cartessa submits the declaration of Robert E. Grove, Ph.D. *See* Ex. 1007. Serendia submits a rebuttal declaration from Paul Stauffer. *See* Ex. 2002.

D. The Challenged Claims

Two of the challenged claims are independent—claims 1 and 11. Claim 1 is a method claim, while claim 11 is an apparatus claim. In challenging these claims, Cartessa "starts with claim 11" (Pet. 15), which recites:

> 11. An apparatus for *treating dermatological tissue*, comprising:
>
> a device including a plurality of needles one of extending or extendable a desired distance from a surface, the desired distance selected to *enable the plurality of needles to penetrate dermatological tissue*; and
>
> a signal generator electrically coupled to the plurality of extended needles to produce pulsed radio frequency signals across the plurality of needles to *affect dermatological tissue near the plurality of needles*.

Ex. 1001, 16:34–43 (emphases added).

[4] US 2002/0120260 A1, published August 29, 2002 (Ex. 1002, "Morris").

[5] US 2003/0130711 A1, published July 10, 2003 (Ex. 1003, "Pearson").

II. ANALYSIS

A. Claim Construction

We apply the claim construction standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). That is, "the words of a claim 'are generally given their ordinary and customary meaning' . . . that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Id.* at 1312–13; *see also* 37 C.F.R. § 42.100(b). Here, Cartessa asserts that we need not construe any claim terms aside from assigning them their ordinary and customary meaning. Pet. 14. Serendia proposes that we construe the claim limitation reciting the production of "pulsed radio frequency signals across the plurality of needles to affect dermatological tissue near the plurality of needles." Prelim. Resp. 16–20. We do not perceive the need to expressly construe that limitation in order to decide the threshold question of institution in this case. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (approving Board decision not to construe claim language where the construction is not material to the dispute).

B. Level of Ordinary Skill in the Art

Cartessa's declarant, Dr. Grove, testifies that one skilled in the art during the relevant time frame "would typically have had (1) seven to ten years of experience with development and/or use of treatment systems for delivery of electromagnetic radiation energy to skin or other tissues, and (2) a related graduate engineering degree or M.D." and "may have worked as part of a multidisciplinary team and drawn upon not only his or her own skills, but also taken advantage of certain specialized skills of others on the team when solving a technical problem." Ex. 1007 ¶ 27. Serendia does not

contest Dr. Grove's articulation of the level of skill in the art. *See generally* Prelim. Resp. Nor do we see any reason to question it. Thus, for purposes of this decision, we analyze the asserted prior art with that level of skill in mind.

C. Independent Claim 11 (and its dependents)

As does Cartessa (*see* Pet. 15), we begin with claim 11, assessing whether the Petition supports a reasonable likelihood that the claimed "apparatus" is unpatentable as obvious over the asserted combination of Morris and Pearson. Cartessa maps the limitations of apparatus claim 11 to various teachings of Morris and Pearson (*see id.* at 16–29) and contends that one skilled in the art would have combined those teachings because "Pearson is an extension of Morris" given they share "common inventors" (*id.* at 29–30). Although Cartessa's reason for combining the teachings of Morris and Pearson may find support in the record, we find that Cartessa fails in its showing that the asserted combination discloses or otherwise suggests an apparatus pertaining to the treatment of "dermatological tissue," as required by claim 11.

More specifically, claim 11 recites that the apparatus "treat[s] dermatological tissue" with a plurality of needles that "penetrate dermatological tissue" and "affect dermatological tissue near the plurality of needles." Ex. 1001, 16:34–43. For those limitations, Cartessa points to disclosures in Morris that concern *ablation of tumor tissue*, not treatment of dermatological tissue. Pet. 17–25 (citing Ex. 1002 ¶¶ 2, 78–79, 113, 124, 145–146). In doing so, Cartessa acknowledges that "dermatological tissue" as recited in claim 11 "is skin." *Id.* at 17. But nowhere do we discern that the cited disclosures in Morris relate to the treatment of dermatological

tissue, i.e., skin, as claimed. Rather, Morris is directed to an entirely different application, namely, the ablation of tumors.

In that regard, Morris focuses exclusively on "the minimally invasive treatment *and ablation of tissue masses such as tumors*" using "independently deployable electrodes configured to controllably *ablate a tumor* proximate or beneath a tissue surface." Ex. 1002 ¶ 2 (emphases added); *see also id.* ¶ 192 ("It will be appreciated that the applicants have provided a novel and useful apparatus and method for the treatment of tumors using surgical or minimally invasive methods."). Indeed, throughout Morris, the discussion centers on the apparatus's ability to ablate unhealthy tumor masses in target organs such as the liver and prostate while minimizing unwanted heating of surrounding healthy tissue. *See id.* ¶¶ 4–6, 78–79, 91, 122, 126–127, 155, 161, 178, 192. Likewise, all the features of Morris's apparatus, such as the configuration of the electrodes, depth of the deployed electrodes, and frequency and duty cycle of RF power supplied to the deployed electrodes, speak to treatment of the tumor mass by "ablation." *See id.* ¶¶ 7, 81, 91–92, 113, 124–127, 129, 144–147, 155, 170, 179–180, 191. Morris's clear and unequivocal focus on using the disclosed apparatus for the treatment and ablation of harmful tumor cells, in our view, negates the use of such an apparatus for the treatment and healing of skin cells.

That ablation of harmful tumor cells does not equate to treatment of skin cells is further supported by Morris's disclosure that the electrodes are deployed "into a tumor or tissue mass so as . . . to precisely treat the tumor while avoiding adjacent critical anatomical structures such as vasculature (e.g. hepatic veins) and nerve plexi." *Id.* ¶ 79; *see also id.* ¶ 78 ("deploy electrodes into the tumor while avoiding and minimizing injury to adjacent

critical anatomical structures that are adjacent and underneath the target tumor mass"). To that end, the electrodes are positioned "to heat, necrose, or ablate any selected target tissue volume" and "to create a variety of different geometric ablation volumes or cell necrosis zones." *Id.* ¶¶ 114, 145. Notably, Morris further explains:

> The heating causes tissue temperature to rise sufficiently *to cause cell injury and death* particularly for temperatures in excess of 50-55° C. Increased amounts of power will result[] in higher temperature and greater magnitude of cell death it is desirable to be able to deliver a range of RF power levels depending upon a variety of parameters include but not limited to tumor size, tissue type, tumor location and amount of tumor vascularization.

Id. ¶ 124 (emphasis added). Indeed, given the increased power levels used by Morris's apparatus in performing tumor ablation, Morris provides precautionary measures "to prevent any appreciable heating of the patient's skin." *Id.* ¶ 154.

After reviewing Morris's disclosure as a whole, we highly doubt one skilled in the art would consider the claimed apparatus, where acupuncture needles are used for the treatment of skin, to be an obvious variant of Morris's apparatus, where ablation electrodes are used to cause "cell injury and death." *Compare* Ex. 1001, 3:3–11, 3:17–21, 3:32–60, Figs. 1B, 2A, *with* Ex. 1002 ¶¶ 124, 129, 145, Figs. 1, 22, 31. More likely than not, Morris's disclosure supports a clear distinction between tumor ablation and skin treatment such that one skilled in the art would not consider Morris's ablation apparatus to be suitable for skin treatment. *See, e.g.*, Ex. 2002 ¶¶ 15, 46, 50.

Nor does Cartessa's addition of Pearson compensate for the deficiencies of Morris in the asserted combination. That is because Cartessa

relies on Pearson for teaching something other than the "dermatological" limitations of claim 11. *See* Pet. 27–30 (relying on Pearson only for the "pulsed radio frequency signals" limitation). In any event, we find that Pearson does not cure the deficiencies of Morris because, as Cartessa acknowledges, Pearson, like Morris, relates to ablation of undesirable tumor cells. *See id.* at 29 (citing Ex. 1003 ¶¶ 2–4). Nor does the testimony of Cartessa's declarant relieve our concerns with Cartessa's showing, as the testimony merely parrots, essentially verbatim, the arguments in the Petition. *Compare* Ex. 1007 ¶¶ 66–71, *with* Pet. 15–17.

In the end, because the asserted combination of Morris and Pearson lacks the limitations of claim 11 requiring that the apparatus "treat[] dermatological tissue," "penetrate dermatological tissue," and "affect dermatological tissue," we determine that Cartessa's Petition fails to support a reasonable likelihood that claim 11 is unpatentable as obvious over Morris and Pearson. And because Cartessa's challenge of dependent claims 12–19 suffers the same deficiencies, we likewise determine that Cartessa falls short in demonstrating a reasonable likelihood that those dependent claims are unpatentable as obvious over Morris and Pearson.

D. Independent Claim 1 (and its dependents)

Like apparatus claim 11, method claim 1 recites limitations directed to treating "dermatological tissue." Ex. 1001, 15:48–57. Cartessa's challenge of claim 1, as well as dependent claims 2–7, 9, and 10, relies on the same challenge and arguments as asserted against claims 11–19. *See* Pet. 44–45 (asserting that "[i]ndependent claim 1 is similar to claim 11" and "[t]hus, for brevity, Petitioner refers back to the analysis of claim 11 for the overlapping limitations"). For the same reasons discussed above with respect to claims

11–19, we determine that Cartessa fails to demonstrate a reasonable likelihood that claims 1–7, 9, and 10 are unpatentable as obvious over Morris and Pearson.

III. CONCLUSION

For the above reasons, we decline to institute *inter partes* review of any of the challenged claims of the '774 patent.

IV. ORDER

Accordingly, it is:

ORDERED that the Petition is *denied*.

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