IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

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| MANUFACTURING RESOURCES INTERNATIONAL, INC.,<br><br>Plaintiff,<br><br>v.<br><br>CIVIQ SMARTSCAPES, LLC, CIVIQ HOLDINGS, LLC, COMARK, LLC, and COMARK HOLDINGS, LLC,<br><br>Defendants. | Civil Action No. 17-269-RGA |

MEMORANDUM OPINION

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September 27, 2018



SEC et al. v. MRI
SEC Exhibit 1012.0001
IPR2023-00255

**ANDREWS, U.S. DISTRICT JUDGE:**

Before the Court is the issue of claim construction of multiple terms in U.S. Patent Nos. 8,854,572 ("the '572 patent"), 8,854,595 ("the '595 patent"), 9,629,287 ("the '287 patent"), 9,173,325 ("the '325 patent"), 9,173,322 ("the '322 patent"), 8,773,633 ("the '633 patent"), 9,285,108 ("the '108 patent") and 9,313,917 ("the '917 patent"). The Court has considered the Parties' Joint Claim Construction Brief. (D.I. 124). The Court issued tentative constructions of seven of the ten disputed terms before oral argument. (D.I. 146). The Court heard oral argument on September 19, 2018. (D.I. 147).

## I. LEGAL STANDARD

"It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (citation omitted).

"'[T]here is no magic formula or catechism for conducting claim construction.' Instead, the court is free to attach the appropriate weight to appropriate sources 'in light of the statutes and policies that inform patent law.'" *SoftView LLC v. Apple Inc.*, 2013 WL 4758195, at *1 (D. Del. Sept. 4, 2013) (quoting *Phillips*, 415 F.3d at 1324) (alteration in original). When construing patent claims, a court considers the literal language of the claim, the patent specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979–80 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). Of these sources, "the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1315.

"[T]he words of a claim are generally given their ordinary and customary meaning.... [This is] the meaning that the term would have to a person of ordinary skill in the art in question

at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1312–13. "[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire patent." *Id.* at 1321. "In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Id.* at 1314.

When a court relies solely upon the intrinsic evidence—the patent claims, the specification, and the prosecution history—the court's construction is a determination of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). The court may also make factual findings based upon consideration of extrinsic evidence, which "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317–19. Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works. *Id.* Extrinsic evidence, however, is less reliable and less useful in claim construction than the patent and its prosecution history. *Id.*

"A claim construction is persuasive, not because it follows a certain rule, but because it defines terms in the context of the whole patent." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that "a claim interpretation that would exclude the inventor's device is rarely the correct interpretation." *Osram GMBH v. Int'l Trade Comm'n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (citation omitted).

## II. BACKGROUND

On March 14, 2017, Manufacturing Resources International, Inc. ("Plaintiff") filed a patent infringement action. The defendants are Civiq Smartscapes, LLC, Civiq Holdings, LLC,

Comark, LLC, and Comark Holdings, LLC (collectively, "Defendants"). The patents in suit are U.S. Patent Nos. 8,854,572 ("the '572 patent"), 8,854,595 ("the '595 patent"), 9,629,287 ("the '287 patent"), 9,173,325 ("the '325 patent"), 9,173,322 ("the '322 patent"), 8,773,633 ("the '633 patent"), 9,285,108 ("the '108 patent") and 9,313,917 ("the '917 patent"). All the patents in suit concern systems and methods for cooling large electronic displays to enable outdoor use year-round regardless of temperature.

The parties dispute terms in claim 1 of the '595 Patent. Claim 1 reads as follows:

1. A system for cooling an electronic display having a *posterior display surface* and contained within a housing, the system comprising:
   a constricted convection plate placed posterior to the *posterior display surface*;
   two side panels placed adjacent to the constricted convection plate and the *posterior display surface*, defining a *constricted convection channel* having an entrance and an exit; and
   a fan placed to draw air from outside the housing through the *constricted convection channel.*

('595 Patent, claim 1) (disputed terms italicized).

The parties dispute a term in claims 4 and 7 of the '322 Patent. The following claim of the '322 Patent is representative:

4. A liquid crystal display (LCD) comprising:
   a liquid crystal stack;
   a backlight assembly behind the liquid crystal stack and comprising:
      a printed circuit board (PCB) having front and back sides;
      a plurality of LEDs mounted on the front side of the PCB;
      a posterior surface on the rear side of the PCB;
   a constricted convection place placed behind and *substantially parallel* with the posterior surface of the PCB; and
   a fan positioned to draw air between the constricted convection plate and the posterior surface.

('322 Patent, claim 4) (disputed term italicized).

The parties dispute terms in claims 1 and 8 of the '572 Patent. The following claim of the '572 Patent is representative:

1. A method for cooling an electronic display having a rear surface, comprising the steps of:
   placing a substantially planar surface adjacent to the *rear surface of the electronic display* to define a gap between the planar surface and the electronic display;
   placing a *closed loop* of circulating gas around the display;
   forcing a circulating gas around the *closed loop*; and
   forcing cooling air through said gap.

('572 Patent, claim 1) (disputed terms italicized).

The parties dispute terms in claim 18 of the '287 Patent. Claim 18 reads as follows:

18. An electronic display assembly comprising:
   a housing;
   an electronic display positioned within the housing;
   a rear cooling chamber positioned behind the electronic display and containing an electrical component which is electrically connected to the electronic display;
   a front surface of the electronic display which faces an intended viewer and a *rear surface of the electronic display* which opposes the front surface;
   wherein *the front surface of the electronic display is coolable by a closed loop of isolated gas* and the *rear surface of the electronic display* is coolable by an *open loop* of ambient air.

('287 Patent, claim 18) (disputed terms italicized).

The parties dispute terms in claim 1 of the '325 Patent. Claim 1 reads as follows:

1. An electronic display assembly comprising:
   a first and second electronic image assembly where the two image assemblies are positioned back to back;
   a first *closed gaseous loop* encircling the first image assembly;
   a second *closed gaseous loop* encircling the second image assembly;
   a heat exchanger placed within the path of both the first and second closed gaseous loops;
   a circulating fan assembly positioned to force circulating gas through the first gaseous loop, second gaseous loop, and heat exchanger; and
   an *open loop* fan which forces ambient air through the heat exchangers;
   wherein the ambient air is not permitted to mix with the circulating gas.

('325 Patent, claim 1) (disputed terms italicized).

The parties dispute a term in claims 1 and 10 of the '633 Patent. The following claim of the '633 Patent is representative:

1. A system for cooling components in an electronic display comprising:
   a thermally conductive plate having a surface area;
   a component having a foot print smaller than the surface area of the plate and placed in thermal communication with the plate; and
   *a plurality of ribs in thermal communication with the plate;*
   wherein the plate provides a gaseous and contaminate barrier between the ribs and the component.

('633 Patent, claim 1) (disputed term italicized).

The parties dispute a term in claims 1 and 10 of the '917 Patent. The following claim of the '917 Patent is representative:

1. A thermal plate for use with an electronic display placed within a thermally-conductive housing, the thermal plate comprising:
   A first portion which is in *conductive thermal communication* with the electronic display; and
   a second portion extending from the first portion and placed within *conductive thermal communication* with the housing.

('917 Patent, claim 1) (disputed term italicized).

## III. CONSTRUCTION OF DISPUTED TERMS

### 1. "rear surface of the electronic display"

a. *Plaintiff's proposed construction*: no construction needed

b. *Defendants' proposed construction*: "rear surface of the backlight"

c. *Court's construction*: To Be Announced

This term appears in asserted claims of the '572 and '287 patents. The parties are submitting additional briefing and the Court will rule once the briefing is complete.

### 2. "posterior display surface"

a. *Plaintiff's proposed construction*: "the rear side of the back of the display" or no construction needed

b. *Defendants' proposed construction*: "posterior surface of the backlight assembly or the posterior surface of any other thin panel display assembly (OLED, plasma, etc.)"

c. *Court's construction*: "rear-facing surface of the display assembly"

This term appears in asserted claims of the '595 patent. Defendants argued that the Plaintiff acted as its own lexicographer by defining "posterior display surface" in the specification of the '595 patent. (D.I. 124 at 16-17). Plaintiff responded that the specification language identified by Defendants is not a definitional statement, but rather a description of an exemplary embodiment. (D.I. 124 at 19). Plaintiff further asserted that there is no clear definitional language, nor a use of quotation marks that would indicate an intent to define the term. (D.I. 124 at 19-20). The Court agrees that there is no clear definitional language within the specification. *See Thorner v. Sony Comput. Entm't Am. LLC*, 669 F.3d 1362, 1365-66 (Fed. Cir. 2012) ("It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must 'clearly express an intent' to redefine the term.").

As Defendants noted, however, Plaintiff's proposed construction would create more ambiguity than clarity in its attempt to construe the term. The Court agrees that Plaintiff's proposed construction is ambiguous. The Court, before oral argument, proposed a tentative construction of "posterior display surface" to mean "rear-facing surface of the display assembly." At oral argument, Plaintiff accepted this construction, while Defendants objected to the Court's use of "display assembly" as broadening the term. (D.I. 147, Tr. at 91:15-19, 92:12-25). Defendants preferred the term "backlight in a back[light] assembly or the posterior surface in any other thin panel display assembly." (*Id.* at 93:12-14). Despite Defendants' objections, the

Court finds that the term has support within the intrinsic evidence of the specification and properly reflects the claim scope. '595 patent at 2:51-54, 3:5. The intrinsic evidence suggests that "backlight assembly" and "thin panel display assembly" are merely examples of a "display assembly." *Id.* at 2:51-54. Therefore, the Court construes "posterior display surface" to mean "rear-facing surface of the display assembly."

**3. "closed loop" / "closed gaseous loop"**

a. *Plaintiff's proposed construction*: "gas pathway within a display housing that is isolated from external air outside the pathway to the extent that dust and contaminates may not substantially enter the pathway"

b. *Defendants' proposed construction*: no construction necessary or "gas pathway within a display housing containing gas that is essentially isolated from external air"

c. *Court's construction*: "gas pathway within a display housing containing gas that is essentially isolated from external air"

These terms appear in asserted claims of the '572, '287, and '325 patents. Plaintiff's proposed construction impermissibly defines "closed loop" in terms of an outcome and not by its function or structure. Furthermore, Defendants' proposed construction reflects the plain and ordinary meaning of the term as reflected by the intrinsic evidence. '572 patent at 3:53-63, 5:28-32; '287 patent at 4:4-11; '325 patent at 6:55-59. At oral argument, Plaintiff indicated it was "prepared to accept [the Court's] tentative construction[]." (D.I. 147, Tr. at 78:1-5). Therefore, the Court construes "closed loop" and "closed gaseous loop" to mean "gas pathway within a display housing containing gas that is essentially isolated from external air."

**4. "open loop"**

a. *Plaintiff's proposed construction*: "gas pathway within a display housing that is open to or accessible to external air"

b. *Defendants' proposed construction*: no construction necessary

c. *Court's construction*: no construction necessary

This term appears in asserted claims of the '287 and '325 patents. Plaintiff's proposed construction provides no additional clarity to the term "open loop" as used in both patents. At oral argument, Plaintiff indicated it was "prepared to accept [the Court's] tentative construction[]." (D.I. 147, Tr. at 78:1-5). Therefore, the Court finds no construction necessary.

**5. "between"**

a. *Plaintiff's proposed construction*: "in the space that separates" or no construction needed

b. *Defendants' proposed construction*: "into contact with"

c. *Court's construction*: "in the space that separates"

This term appears in asserted claims of the '322 patent. Defendants asserted that Plaintiff acted as its own lexicographer for the term "between" because the specification includes embodiments which describe the constricted convectional channel as "directing air into contact with" the posterior display surface. (D.I. 124 at 32). Plaintiff advocates that "in the space that separates" gives effect to the ordinary and plain meaning of the term in the context of the patent. I agree. Defendants' proposed construction impermissibly reads limitations from embodiments in the specification ('322 col. 6:33-35) into the claim. Defendants ignore multiple other embodiments in the '322 patent that do not use the words "into contact with" but rather "through" or "between" to describe how air travels in the constricted convection channel. ('322

col. 5:1-5, 47-54, col. 6:2-13). The inventors specifically stated that "direct" physical contact was "not required." ('322 col. 9:22-24). Therefore, the Court construes "between" to mean "in the space that separates."

**6. "constricted convection channel"**

a. *Plaintiff's proposed construction*: "a narrow passage immediately behind the posterior display surface formed by the constricted convection plate and the posterior display surface and the side panels through which outside air can pass through to remove heat from the posterior display surface through convective heat transfer"

b. *Defendants' proposed construction*: "channel located behind the posterior display surface which directs air into contact with the posterior display surface"

c. *Court's construction*: "constricted channel through which air may flow to remove heat from the posterior display surface"

This term appears in asserted claims of the '595 patent. Plaintiff argued that its construction should be adopted because it gives effect to each word in the term "constricted convection channel" and is "consistent with the explicit definition . . . provided in claim 1 itself" (D.I. 124 at 38). Defendants responded that Plaintiff's proposal of the term "narrow" is imprecise and that Plaintiff's proposed construction creates redundant limitations. (D.I. 124 at 41). Defendants are correct. However, Defendants' proposed construction impermissibly narrows the claim scope by reading limitations from isolated portions of the specification into the claim.

At oral argument, the Court proposed a tentative construction of "constricted convection channel" to mean "a constricted channel through which air may flow to remove heat from the posterior display surface." (D.I. 147, Tr. at 33:3-5). Plaintiff accepted the Court's proposed

definition. (*Id.* at 34:4-5). Defendants asserted that the Court's construction should be modified to "a constricted channel through which air may flow to *directly* remove heat from the posterior display surface" to capture the idea that the air must be in contact with the posterior display surface to remove heat. (*Id.* at 33:9-17). However, this construction again impermissibly reads limitations from embodiments into the claim language. Therefore, the Court construes "constricted convection channel" to mean "constricted channel through which air may flow to remove heat from the posterior display surface".

**7. "plurality of ribs in thermal communication with the plate"**

a. *Plaintiff's proposed construction*: no construction needed

b. *Defendants' proposed construction*: "plurality of ribs wherein heat is transferred to and/or from the plate to the ribs via conductive, convective, radiative means or any combination thereof"

c. *Court's construction*: "plurality of ribs capable of thermal communication with the plate"

This term appears in asserted claims of the '633 patent. Plaintiff asserted that the term needs no construction because the parties have agreed that: (1) "ribs" does not need construction, and (2) "thermal communication" shall be defined as "transfer of heat via conductive, convective, radiative means or any combination thereof." (D.I. 124 at 5). Defendants argued that "the phrase 'in thermal communication' is a structural limitation that describes the relationship between the claimed 'plurality of ribs' and plate." (*Id.* at 48.) Defendants further asserted that the term should be construed to require the transfer of heat between the ribs and plate because Plaintiff disclaimed "capability" of thermal communication in the prosecution history. (*Id.* at 49).

The Court disagrees. First, the term "in thermal communication" operates as a functional claim limitation to describe the capability of the ribs and plate to transfer heat. The use of "in thermal communication" does not require that actual heat transfer occurs, as argued by the Defendants. Moreover, the specification supports the construction of "in thermal communication" as the capability of the ribs and plate to thermally communicate with each other. '633 patent at 5:45-51, 62-65. Defendants' reliance on *Vanguard Prod. Corp. v. Parker Hannifin Corp.*, 234 F.3d 1370 (Fed. Cir. 2000) is mistaken. The Federal Circuit in *Vanguard* determined that the term "'integral' … mea[nt] formed as a unit with another part" because "the word 'integral' describe[d] the relationship between the elastomeric layers, not the means of joining them." *Id.* at 1371-72 (internal quotation marks omitted). However, the term "integral" solely described the relationship, not the function of those layers. Here, the term "in thermal communication" indicates the function or activity that may occur between the ribs and the plate. Defendants' proposed construction therefore interprets the claim scope too narrowly.

Second, the prosecution history does not disclaim structures that are capable of thermal communication. The prosecution history indicates only that Plaintiff distinguished the '633 patent from U.S Patent No. 6,473,150 ("Takushima") and Japanese Patent App. No. 09-214156 ("the '156 application") because neither reference taught the placement of ribs in heat transfer with a plate. Rather, the Takushima reference taught to place ribs in contact with a fan to reduce vibrations, while the '156 application taught to place ribs in contact with a plate for structural stability. Neither reference indicated whether the ribs were made from a thermally conductive material.

Therefore, the Court construes "plurality of ribs in thermal communication with the plate" to mean "plurality of ribs capable of thermal communication with the plate."

**8. "conductive thermal communication"**

a. *Plaintiff's proposed construction*: "the transfer of heat within an object or between objects through physical contact"

b. *Defendants' proposed construction*: "physical contact that results in the transfer of heat"

c. *Court's construction*: "the transfer of heat between objects through physical contact"

This term appears in asserted claims the '633 and '917 patents. The parties have agreed to define "thermal communication" as "transfer of heat via conductive, convective, radiative means or any combination thereof". (D.I. 124 at 5). Therefore, the Parties' dispute centers on the word "conductive" as a modifier for "thermal communication." Plaintiff's proposed construction for "conductive thermal communication" would encompass both heat transfer within an object and between objects. (D.I. 124 at 57). However, as Defendants argued, and this Court agrees, the plain meaning of the term "communication" and its use throughout both patents indicates that the heat transfer encompassed by these terms must occur between multiple objects. (D.I. 124 at 59, 61). Plaintiff's construction would read out the terms "in" and "within" that precede "conductive thermal communication" throughout the patent. *Bicon*, 441 F.3d at 951 (rejecting a construction that would read limitations out of the claim). At oral argument, Plaintiff indicated it was "prepared to accept [the Court's] tentative construction[]." (D.I. 147, Tr. at 78:1-5). Therefore, the Court construes "conductive thermal communication" to mean "the transfer of heat between objects through physical contact".

**9. "substantially parallel"**

a. *Plaintiff's proposed construction*: "approximately parallel" or no construction needed

b. *Defendants' proposed construction*: indefinite

c. *Court's construction*: "approximately parallel"

This term appears in asserted claims of the '322 patent. Defendants argued that the term "substantially parallel" is indefinite "because it fails to inform a POSA, with reasonable certainty, of the scope of invention." (D.I. 124 at 66). *Nautilus Inc. v. Biosig Instruments, Inc.* sets out that "a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." 134 S. Ct. 2120, 2124 (2014). After *Nautilus*, the Federal Circuit has continued to uphold terms of degree, recognizing that "absolute precision is unattainable." *Apple Inc. v. Samsung Elecs. Co.*, 786 F.3d 983, 1002-03 (Fed. Cir. 2015).

The Federal Circuit has upheld the use of "substantially" as a term of degree in several post-*Nautilus* cases. *See Apple*, 786 F.3d at 1002-02 (finding "substantially centered" not indefinite); *Tinnus Enters., LLC v. Telebrands Corp.*, 846 F.3d 1190, 1205-06 (Fed. Cir. 2017) (suggesting that "substantially filled" is not indefinite). The Federal Circuit has also previously held the phrase "generally parallel" is not indefinite and that it "envisions some amount of deviation from exactly parallel." *Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1311 (Fed. Cir. 2003). A person of ordinary skill in the art would be informed of the scope of the invention when reading the term "substantially parallel" in light of the specification and prosecution history. Therefore, the Court finds that "substantially parallel" is not indefinite and construes the term to mean "approximately parallel."

**10. "the front surface of the electronic display is coolable by a closed loop of isolated gas"**

a. *Plaintiff's proposed construction*: Not indefinite

b. *Defendants' proposed construction*: Indefinite

c. *Court's construction*: Not indefinite.

This term appears in asserted claims of the '287 patent. Defendants asserted that the term is indefinite "because it adds a functional limitation to the asserted claims of the '287 patent without any corresponding structure in the specification." (D.I. 124 at 75). Defendants argued that while functional language can be definite, the '287 patent provides no quantitative metrics or formula to determine how "coolable" the front surface of the electronic display needs to be to infringe. (D.I. 124 at 75-76); *see also Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1255-56 (Fed. Cir. 2008). Plaintiff responded that "coolable" defines the front surface's *capability* of being cooled and that a person of ordinary skill in the art would understand the scope of invention as required by *Nautilus*. This Court agrees.

To be definite, a claim must only inform a person of ordinary skill in the art of the invention's scope with reasonable certainty. *Nautilus*, 134 S. Ct. at 2124. Absolute precision is not required. *Apple v. Samsung*, 786 F.3d 983, 1002-03 (Fed. Cir. 2015). Furthermore, the Federal Circuit has held that "breadth is not indefiniteness." *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1367 (Fed. Cir. 2017) (quoting *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1341 (Fed. Cir. 2005)). In other words, indefiniteness may not be implied from the scope of the invention. *BASF*, 875 F.3d at 1367. While the term coolable is broad, it is not indefinite. Unlike in *Halliburton Energy Servs., Inc. v. M-I LLC*, where the court held that the term "fragile gel" was indefinite because it required a case-by-case determination of whether the

same gel was "fragile" depending on the formation or well configuration, 514 F.3d 1244, 1254-55 (Fed. Cir. 2008), here it is quite clear that any front display surface that is capable of being cooled—however minutely—is included within the scope of the invention. Therefore, the Court finds that "the front surface of the electronic display is coolable by a closed loop of isolated gas" is not indefinite.

## IV. CONCLUSION

Within five days the parties shall submit a proposed order consistent with this Memorandum Opinion suitable for submission to the jury.