

PUBLIC

UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.

Before the Honorable Monica Bhattacharyya
Administrative Law Judge

In the Matter of

CERTAIN OUTDOOR AND SEMI-
OUTDOOR ELECTRONIC DISPLAYS,
PRODUCTS CONTAINING SAME,
AND COMPONENTS THEREOF

Inv. No. 337-TA-1331

COMPLAINANT MANUFACTURING RESOURCES INTERNATIONAL, INC.'S
OPENING CLAIM CONSTRUCTION BRIEF

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TABLE OF ABBREVIATIONS

Abbreviation	Description
'595 Patent	U.S. Patent No. 8,854,595
'322 Patent	U.S. Patent No. 9,173,322
'287 Patent	U.S. Patent No. 9,629,287
'740 Patent	U.S. Patent No. 10,506,740
'142 Patent	U.S. Patent No. 11,013,142
'454 Provisional	U.S. Provisional Application No. 61/039,454
IPR	<i>Inter partes</i> review
POSITA	Person of ordinary skill in the art
Civiq case	<i>Manufacturing Resources International, Inc. v. Civiq Smartscales LLC</i> , No. 17-269 (D. Del.)
Smith-Gillespie Declaration	Declaration of Robert Smith-Gillespie Smith-Gillespie Declaration
Pokharna Declaration	Rebuttal Declaration of Dr. Himanshu Pokharna on Claim Construction Pokharna Declaration
Credelle Declaration	Rebuttal Declaration of Thomas L. Credelle on Claim Construction Credelle Declaration

TABLE OF EXHIBITS

Exhibit Number	Document
JXM-001	U.S. Patent No. 8,854,595
JXM-002	U.S. Patent No. 9,173,322
JXM-003	U.S. Patent No. 9,629,287
JXM-004	U.S. Patent No. 10,506,740
JXM-005	U.S. Patent No. 11,013,142
Exhibit 6	U.S. Provisional Application No. 61/033,064
Exhibit 7	U.S. Provisional Application No. 61/039,454
Exhibit 8	Claim Construction Order, <i>Manufacturing Resources International, Inc. v. Civiq Smartscales LLC</i> , No. 17-269 (D. Del. Sept. 27, 2018) (Dkt. 150)
Exhibit 9	<i>See Samsung Electronics v. Manufacturing Resources Int'l, Inc.</i> , IPR2023-00221, Petition for <i>Inter Partes</i> Review (Dec. 7, 2022) ('142 Patent)
Exhibit 10	<i>Samsung Electronics v. Manufacturing Resources Int'l, Inc.</i> , IPR2023-00254, Petition for <i>Inter Partes</i> Review (Dec. 3, 2022) ('740 Patent)
Exhibit 11	<i>Samsung Electronics v. Manufacturing Resources Int'l, Inc.</i> , IPR2023-00255, Petition for <i>Inter Partes</i> Review (Dec. 13, 2022) ('287 Patent)
Exhibit 12	IPR2023-00220, Petition for <i>Inter Partes</i> Review (Dec. 5, 2022) ('322 Patent)
Exhibit 13	<i>Samsung Electronics v. Manufacturing Resources Int'l, Inc.</i> , IPR2023-00199, Petition for <i>Inter Partes</i> Review (Nov. 22, 2022) ('595 Patent)
Exhibit 14	File History of U.S. Patent No. 8,854,595 (MRI-ITC-1331_0000001916)
Exhibit 15	File History of U.S. Patent No. 9,173,322 (MRI-ITC-1331_0000002321)
Exhibit 16	File History of U.S. Patent No. 9,629,287 (MRI-ITC-1331_0000002570)
Exhibit 17	File History of U.S. Patent No. 10,506,740 (MRI-ITC-1331_0000002678)
Exhibit 18	File History of U.S. Patent No. 11,013,142 (MRI-ITC-1331_0000006531)

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Exhibit Number	Document
Exhibit 19	Declaration of Robert Smith-Gillespie (“Smith-Gillespie Declaration”)
Exhibit 20	Rebuttal Declaration of Dr. Himanshu Pokharna on Claim Construction (“Pokharna Declaration”)
Exhibit 21	File History of U.S. Patent No. 9,089,079 (RESPONDENTS004095)
Exhibit 22	Respondents’ Joint Responses to Non-Burden Contentions Interrogatories in Response to Individual Interrogatories.
Exhibit 23	Rebuttal Declaration of Thomas L. Credelle on Claim Construction (“Credelle Declaration”)
Exhibit 24	<i>Between</i> , The New Oxford American Dictionary (2d ed. 2005)
Exhibit 25	<i>Constricted</i> , Webster’s Third New International Dictionary (2002), p.4 89

I. INTRODUCTION

The “general rule” of claim construction applies to this case: disputed claim terms should be given their ordinary and customary meaning. *Apple Inc. v. MPH Techs. Oy*, 28 F.4th 254, 259 (Fed. Cir. 2022). For five of the disputed terms, there is no basis for construing the terms differently. The terms are not complicated, most using plain language that in context needs no specialized knowledge to understand. The patentee did not redefine any of those disputed terms, nor did the patentee disclaim any portion of the ordinary meaning in the specification or prosecution history. No construction is necessary and the terms should be accorded their plain and ordinary meaning.

Respondents’ proposed constructions for these terms, by contrast, import into the disputed terms unnecessary and unsupported limitations. Respondents ignore the plain language of the claim, ignore aspects of the patent specifications and prosecution history, and rely instead on extrinsic evidence to transform the meaning of the disputed terms beyond their subject matter. None of Respondents’ proposed constructions for these terms comport with the law. And none serve the central purpose of claim construction: to clarify the meaning and scope of the disputed terms. Instead, Respondents ask your Honor to construe terms in ways that violate well-settled claim construction principles to create non-infringement or invalidity positions.

For the two terms that recite “constricted convection,” namely “constricted convection plate” and “constricted convection channel” construction is warranted. Those are not terms of art and the intrinsic record provides significant and clear guidance regarding the meaning of “constricted convection” when read in the proper context. MRI’s proposed constructions are consistent with the context and guidance provided by the intrinsic record. Respondents do not propose a construction for “constricted convection plate” and merely repeat the construction of

“constricted convection channel” from an earlier litigation involving the ’595 Patent—a construction that simply repeats the words constricted and channel from the claim. Respondents’ constructions fail to give effect to the context provided by the specification and thus should be rejected in favor of MRI’s proposed constructions, which are consistent with that context.

For these reasons, your Honor should reject Respondents’ constructions, and accept MRI’s.

II. FACTUAL BACKGROUND

A. The Asserted Patents

This investigation involves five of MRI’s patents related to cooling devices and systems for large format electronic displays in environments of high thermal stress: U.S. Patent No. 8,854,595 (the “’595 Patent”) (JXM-001); U.S. Patent No. 9,173,322 (the “’322 Patent”) (JXM-002); U.S. Patent No. 9,629,287 (the “’287 Patent”) (JXM-003); U.S. Patent No. 10,506,740 (the “’740 Patent”) (JXM-004); and U.S. Patent No. 11,013,142 (the “’142 Patent”) (JXM-005). These five patents share two common parent provisional patents, U.S. Prov. App. No. 61/033,064 (Ex. 6), filed March 3, 2008, and U.S. Prov. App. No. 61/039,454 (“the ’454 Provisional”) (Ex. 7), filed March 26, 2008.

The ’595 Patent claims a cooling system for cooling an electronic display positioned within a housing using a constricted convection plate placed posterior to the display in order to create a constricted convection channel. *See, e.g.*, JXM-001 at Abstract, 2: 43-59, Claim 1. The ’322 Patent claims a system for cooling an electronic display using a constricted convection channel formed by a bracket that connects the display and a constricted convection plate, and fans to move air throughout the system. *See, e.g.* JXM-002 at Abstract, Claim 1. The ’595 Patent and ’322 Patent each share a specification and name William Dunn as the sole inventor.

The '287 Patent claims an electronic display within a housing that is cooled by a combination of isolated gas within a closed loop and ambient air within an open loop that passes along the backlight. JXM-003 at Abstract, Fig. 2, Fig. 3, Claim 12. The '287 Patent names William Dunn as the sole inventor.

The '740 Patent claims an electronic display within a housing that is cooled by the flow of two separate airflows—an open loop ambient air pathway and a closed loop gas pathway—that both pass through and exchange energy at a heat exchanger. *See* JXM-004 at Abstract, Claim 1. The '142 Patent claims a cooling system for electronic displays using an open loop airflow pathway and closed loop airflow pathway in combination with heat exchangers, polarizers, and anti-reflective films. JXM-005 at Abstract, 2:41-58.

B. History of Outdoor Electronic Displays

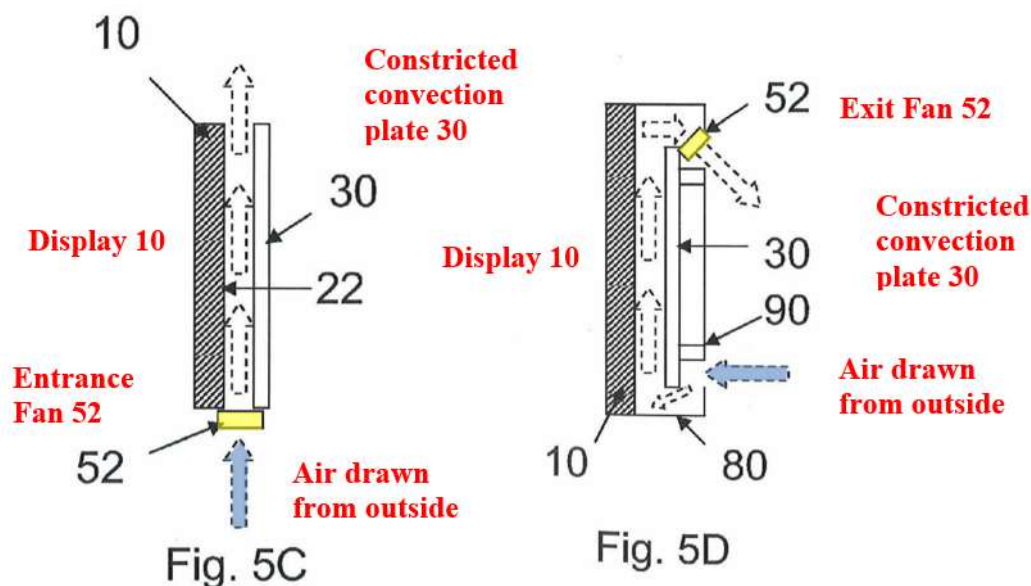
Prior to the early 2000s, electronic displays were predominantly used in indoor environments and in small formats. The larger the LCD display, the more heat that is generated by the display surface and backlight. When the large format displays are placed in outside environments, the thermal load from ambient temperature and solar radiation causes the outdoor electronic display to malfunction. U.S. Patent No. 11,013,142 (JXM-005), at 2:30-37. Prior to MRI's invention, past systems for cooling the display attempted to remove heat from the electronic display through heat sinks and using fans to direct ambient air over the electronic components. *See* U.S. Patent No. 8,854,595 (JXM-001), at 1:53-59. However, by itself, these systems are inadequate to cool larger format displays located outside or in areas of high thermal stress. U.S. Patent No. 9,629,287 (JXM-003), at 2:3-17.

C. MRI's Invention of the Open Loop, Closed Loop, Convection Channel System

MRI invented a novel cooling system for outdoor electronic displays with embodiments that allow the displays to function in high ambient temperatures and/or in the sun without the need for air conditioners. MRI's novel cooling systems utilize a combination of a closed loop of isolated gas circling within the housing, an open loop of ambient air passing through the housing, and cooling created by a constricted convection channel. *See, e.g.* JXM-001, at 7:64-9:5.

1. Constricted Convection Channel

The constricted convection feature of the MRI invention can be seen in the '595 Patent. *See generally*, JXM-001. In the '595 Patent, a constricted convection channel is formed behind the display using a constricted convection plate as depicted in the annotated¹ Fig. 5C and 5D from the '595 Patent below:



¹ *See* Ex. 23, at 10.

Fans move air through the narrow channel behind the display, from an entrance to an exit, to remove heat from the electronic display posterior 22. *See e.g.*, JSM-001 at 6:30-37. As explained in the '454 Provisional, the narrowing of the airflow path by the constricted convection channel 50 increases the effectiveness of the heat transfer from the display to the air. Ex. 7 at [0032]. This constricted convection cooling of the backlight allows for exemplary cooling of large format screens in outdoor environments. *Id.* at 4:8-15. The '322 Patent shares the same disclosure as the '595 Patent.

2. Open Loop and Closed Loop

The overall configuration of one exemplary embodiment of MRI's open loop and closed loop system can be seen in Figures 2-3 of the '287 Patent. Figure 2 shows a horizontal cross section of the electronic display in its housing. *See* '287 Patent at 3:23-24.

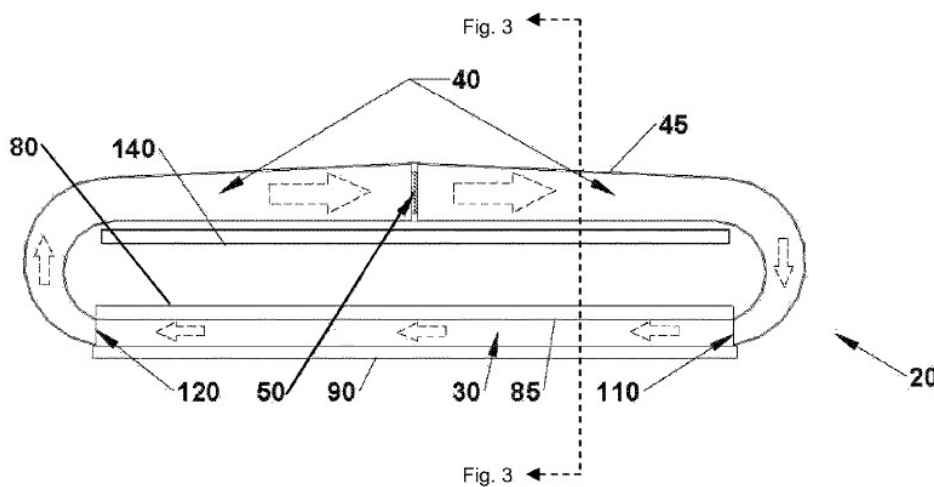
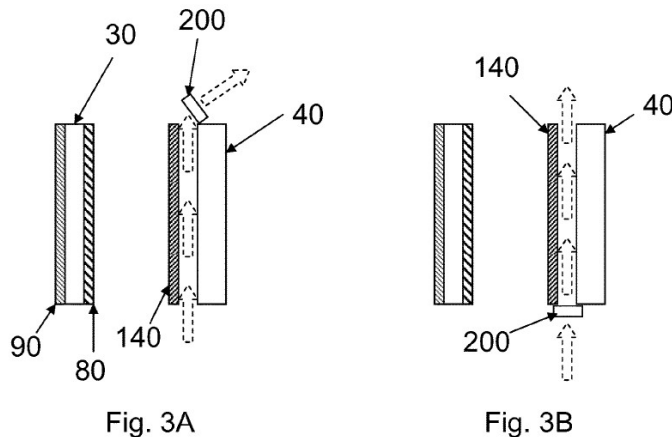


Fig. 2

Figure 2 shows an embodiment of the invention there the closed loop of isolated gas travels in chamber 20 through the housing. *Id.* at 4:4-8. In this embodiment, the closed loop of isolated gas can be seen traveling between the electronic display surface 85 and between the

transparent plate 90 which allows observers to see through the gas and observe the image displayed on the electronic display surface 85. *Id.* at 4:28-41.

Figure 3A and Figure 3B show a vertical cross section of the electronic display, including the location of one open loop of ambient air. *See id.* at 3:25-26.



The vertical cross section shows the same electronic display 80 and transparent plate that form part of the closed loop of isolated gas system. *Id.* at 4:42-46. Towards the rear of the electronic display, there is a backlight 140. *Id.* at 4:46-47. The backlight serves to illuminate the LCD stack, and can be a significant source of heat for an electronic display—especially in large format screens. *Id.* at 3:1-2; 2:14-15. The backlight 140 is placed in close proximity to the surface of the rear portion of the closed loop of ambient air (referred to in the '287 Patent as the “rear cooling chamber” 40). *Id.* “The close proximity of these two elements, in part, creates the constricted convection cooling of the backlight 140. *Id.* at 4:48-50. Moving air through that smaller space between the backlight 140 and surface of the closed loop of isolated gas (“rear cooling chamber” 40) increases the cooling of the electronic display system. *Id.* at 4:52-54.

D. Prior/Parallel Litigations and Claim Construction Rulings

Three of the Asserted Patents—the '595 Patent, '322 Patent, and '287 Patent—were the subject of earlier claim construction proceedings in a prior district court action between MRI and

a third-party not named in this investigation. Claim Construction Order, *Manufacturing Resources International, Inc.*, No.17-269 (D. Del. Sept. 27, 2018) (Ex. 8). In that case, the court construed four terms at dispute in the instant investigation:

The court construed “closed loop” in the ’287 Patent to mean “gas pathway within a display housing containing gas that is essentially isolated from external air.” The court construed “constricted convection channel” in the ’595 Patent to mean “constricted channel through which air may flow to remove heat from the posterior display surface.” The court construed “posterior display surface” in the ’595 Patent to mean “rear-facing surface of the display assembly.” Finally, the court construed “between” in the ’322 Patent to mean “in the space that separates.”

Two of the Respondents² in this investigation filed petitions for *inter partes* review (“IPR”) at the Patent and Trial Appeals Board (the “PTAB”) in the United States Patent and Trademark Office (the “USPTO”) that are relevant to the claim construction issues in this investigation. *See Samsung Electronics v. Manufacturing Resources Int’l, Inc.*, IPR2023-00221, Petition for *Inter Partes* Review (Dec. 7, 2022) (Ex. 9) (’142 Patent); *Samsung Electronics v. Manufacturing Resources Int’l, Inc.*, IPR2023-00254, Petition for *Inter Partes* Review (Dec. 3, 2022) (Ex. 10) (’740 Patent); *Samsung Electronics v. Manufacturing Resources Int’l, Inc.*, IPR2023-00255, Petition for *Inter Partes* Review (Dec. 13, 2022) (Ex. 11) (’287 Patent); *Samsung Electronics v. Manufacturing Resources Int’l, Inc.*, IPR2023-00220, Petition for *Inter Partes* Review (Dec. 5, 2022) (Ex. 12) (’322 Patent); *Samsung Electronics v. Manufacturing*

² Samsung Electronics Co. Ltd. and Samsung Electronics America Inc. filed the petitions with the USPTO. Those Respondents named the remaining Respondents in this investigation—Samsung SDS Co. Ltd., Samsung SDS America, Inc., Coates Signco Pty. Ltd., Coates US Inc., and Industrial Enclosure Corporation d/b/a Palmer Digital Group—as real parties in interest.

Resources Int'l, Inc., IPR2023-00199, Petition for *Inter Partes* Review (Nov. 22, 2022) (Ex. 13) ('595 Patent).

In those Petitions, the Respondents urge the USPTO to adopt several of the claim constructions of the *Civiq* District Court Case. *See* Ex. 12, at 14 (asking the court to adopt the construction of “between” and “substantially parallel” for the '322 Patent); Ex. 13, at 11 (asking the court to adopt the district courts construction of “posterior display surface” and “constricted convection channel” for the '595 Patent); Ex. 11, at 12 (asking the court to adopt the terms “closed loop” and “closed gaseous loop” in the '287 Patent). Further, Respondents ask the PTAB to adopt the same construction of “closed loop” for the '740 Patent and '142 Patent—arguing the court’s prior construction of the related '287 Patent should also apply in the context of newly contested patents and claims. *See* Ex. 9, at 18-20; Ex. 10, at 15-17. Notably, in the instant investigation, Respondents also ask the court to adopt the same construction for “closed loop” in the '595 Patent, but do not ask the PTAB to do the same. *See* Ex. 13, at 11-12.

For three of the Asserted Patents, Respondents ask the PTAB to adopt its newly conceived construction of “open loop of ambient air which passes through the housing and along the backlight.” *See* Ex. 11, at 14-15.

The time for the Patent Owner’s Response in any of the above petitions has not yet come due, and MRI has yet to provide its own position on term construction in the PTAB proceedings.

III. ARGUMENT

A. Legal Standards

The central purpose of claim construction is to clarify the disputed meanings and technical scope of terms, and “when necessary, to explain what the patentee covered by the claim.” *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). “[O]nly

those [claim] terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.” *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

1. The Intrinsic Record is the Cornerstone of the Claim Construction Analysis

To determine the meaning of claim terms at issue, courts rely on intrinsic evidence: the claims, specification, and prosecution history for the patent at issue. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313-14 (Fed. Cir. 2005); *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The words of a claim “are generally given their ordinary and customary meaning.” *Phillips*, 415 F.3d at 1312. 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 1313.

When construing claims, “the analytical focus must begin and remain centered on the language of the claims themselves, for it is that language that the patentee chose to use to ‘particularly point out and distinctly claim the subject matter which the patentee regards as his invention.’” *Interactive Gift Exp., Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001). The claims are the cornerstone of the *Markman* process because they “give notice both to the examiner at the U.S. Patent and Trademark Office during prosecution, and to the public at large, including potential competitors, after the patent has issued.” *Johnson & Johnston Assoc. Inc. v. R.E. Service Co., Inc.*, 285 F.3d 1046, 1052 (Fed. Cir. 2002) (en banc);

Claims “must be read in view of the specification, of which they are a part.” *Phillips*, 415 F.3d at 1315. The specification is always relevant to the claim construction analysis, *id.*, but it is “is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic

record that the patentee intended the claims to be so limited.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

The prosecution history may be another tool to supply context for claim construction. *Phillips*, 415 F.3d at 1317. “The prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.* But “because the prosecution history represents an ongoing negotiation between the [Patent Office] and the applicant, rather than the final product . . . , it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.*

Extrinsic evidence may also be useful in some cases, but it is “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Id.* For example, technical dictionaries may help a court understand the underlying technology and the manner in which one skilled in the art might use technical terms. *Id.* at 1318. However, extrinsic evidence is less reliable than the patent and its prosecution history. *Id.* Further, extrinsic evidence in the form of expert testimony that is at odds with the intrinsic evidence must be disregarded.

Network Commerce, Inc. v. Microsoft Corp., 422 F.3d 1353, 1361 (Fed. Cir. 2005).

2. Claims are Given their Ordinary and Customary Meaning

As a general rule, claim terms are given their “ordinary and customary meaning.” *Apple Inc. v. MPH Techs. Oy*, 28 F.4th at 259; *Phillips*, 415 F.3d at 1312. The “ordinary and customary meaning” 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.” *Phillips*, 415 F.3d at 1312–13. Where there is “no facial ambiguity or obscurity in the claim term,” the Federal Circuit imposes “demanding standards for displacing . . . an ordinary meaning . . . [because] the terms at issue have so clear an ordinary

meaning that a skilled artisan would not be looking for clarification in the specification.” *Ancora Techs., Inc. v. Apple, Inc.*, 744 F.3d 732, 738 (Fed. Cir. 2014).

To determine the “ordinary and customary meaning” of a term, courts consider the claim terms and the context of the surrounding words of the claim. *ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003); *see also Phillips*, 415 F.3d at 1314. A term’s ordinary and customary meaning “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.” *Acumed*, 483 F.3d at 805. If a claim uses common words, the Court may determine that the ordinary and customary meaning requires no further construction. *Summit 6, LLC v. Samsung Elecs. Co., Ltd.*, 802 F.3d 1283,1291 (Fed. Cir. 2015).

A court may depart from the ordinary and customary meaning in only a few exceptional circumstances. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1580 (Fed. Cir. 1996). Each exception is construed narrowly because it is “unjust to the public, as well as an evasion of the law, to construe [a claim term] in a manner different from the plain import of its terms.” *White v. Dunbar*, 119 U.S. 47, 51–52 (1886). “Courts do not rewrite claims; instead [they] give effect to the terms chosen by the patentee.” *Helmsderfer v. Bobrick Washroom Equipment, Inc.*, 527 F.3d 1379, 1383– 84 (Fed. Cir. 2008).

The first exception to “ordinary and customary meaning” is when the patentee acts as a “lexicographer” by redefining a claim term to have a unique meaning. The “standard for lexicography is exacting.” *Baxalta Inc. v. Genentech, Inc.*, 972 F.3d 1341, 1349 (Fed. Cir. 2020). Lexicography requires more than the inventor “simply disclos[ing] a single embodiment or us[ing] a word in the same manner in all embodiments.” *Thorner v. Sony Computer Entertainment Am. LLC*, 669 F.3d 1362, 1365–68 (Fed. Cir. 2012). In order for the patentee to

redefine a term, they must “clearly express that intent in the written description” with “sufficient clarity to put one reasonably skilled in the art on notice that the inventor intended to redefine the claim term.” *Merck & Co., Inc. v. Teva Pharmaceuticals USA, Inc.*, 395 F.3d 1364, 1370 (Fed. Cir. 2005). For example, a patentee may use quotation marks and definitional language to indicate that they are redefining a term. *Sinorgchem v. ITC*, 511 F.3d 1132, 1136 (Fed. Cir. 2007).

A second exception is referred to as a “prosecution history disclaimer.” Like a specification disclaimer, the standard for a prosecution history disclaimer is “exacting, requiring clear and unequivocal evidence that the claimed invention includes or does not include a particular feature.” *Cisco*, 873 F.3d at 1361. The doctrine of prosecution history disclaimer prevents a patentee “from recapturing through claim interpretation specific meanings disclaimed during prosecution.” *Massachusetts Inst. of Tech. v. Shire Pharms., Inc.*, 839 F.3d 1111, 1119 (Fed. Cir. 2016). Here too, an “ambiguous disclaimer” will not “limit a claim term’s ordinary meaning.” *SanDisk Corp. v. Memorex Prods., Inc.*, 415 F.3d 1278, 1287 (Fed. Cir. 2005).

B. A Person of Ordinary Skill in the Art (“POSITA”)

The disputed claim terms use common, non-technical words that are readily understood by a judge, and persons of ordinary skill in the art alike. Thus, the Court need not expressly define the person and level of ordinary skill in the art for purposes of claim construction. *See, e.g., SecurityPoint Holdings, Inc. v. U.S.*, 111 Fed. Cl. 1, 6 (Ct. Fed. Cl. 2013) (refusing to make a ruling as to the level of skill in the art since it did not impact the claim construction analysis).

In this case, the relevant field of art is large format electronic displays for use in outdoor settings or environments of high thermal stress. A POSITA would have the following qualifications:

A bachelor’s degree in a pertinent discipline, such as mechanical or electrical engineering, physics, applied physics, or a related field. Such a person would also

have had 2-4 years of experience in working with electronic displays including thermal management associated with electronic displays. Alternatively, a POSITA would have had 4-6 years of experience in the field and would have developed a similar understanding of thermal management associated with electronic displays.

Ex. 20, at ¶ 22-24; Ex. 23, at ¶ 31-33.

C. Construction of the Disputed Terms

1. The “draw air” terms

Term or Phrase	Complainant’s Proposed Construction	Respondents’ Proposed Construction
“a fan placed to draw air from outside of the housing through the constricted convection channel” (’595 Patent, claim 1) “a fan positioned to draw air through the constricted convection channel” (’595 Patent, claim 4) “a fan placed to draw ambient air between the constricted convection plate and the rear posterior” (’322 Patent, claim 1) “a fan positioned to draw air between the constricted convection plate and the posterior surface” (’322 Patent, claim 4)	Plain and ordinary meaning.	“a fan positioned to pull air [from outside the housing] through and out of the constricted convection channel”/ “a fan positioned to pull [ambient] air through and out of the space that separates the constricted convection plate and the [rear posterior/posterior surface]”

Claim 1 of the ’595 patent is reproduced below:

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 of the housing through the constricted convection channel.

JXM-001 at 9:61-10:6.

Claim 1 of the '322 patent is reproduced below:

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 covering the majority of the posterior display surface;

at least one bracket which connects the posterior display surface with the constricted convection plate; and

a fan placed to draw ambient air between the constricted convection plate and the rear posterior.

JXM-002 at 9:60-10:2.

The claim term “a fan placed to draw air from outside of the housing through the constricted convection channel” and its variants have the full scope of their plain and ordinary meaning. Respondents propose rewriting the claims to, most notably, incorporate an additional “and out of” limitation that would restrict the claims to particular embodiments from the specification (i.e., embodiments where a fan is placed at the exit of the constricted convection channel). There is no basis for rewriting the claim language in the manner Respondents propose. *See e.g., Immunex Corp. v. Sanofi-Aventis U.S. LLC*, 977 F.3d 1212, 1220 (Fed. Cir. 2020) (“there is a strong presumption against a claim construction that excludes a disclosed embodiment.”) (citation omitted).

Respondents’ expert, Mr. Smith-Gillespie contends that “the claims distinguish between ‘drawing’ fans and ‘forcing’ fans.” Ex. 19, ¶ 61. He asserts that “forcing” fans “are used to ‘blow

air” and are “placed at the entrance” whereas “drawing” fans are “‘exhaust’ fans” and are “placed at the exit.” Ex. 19, ¶¶ 39. Mr. Smith-Gillespie—and Respondents—rely upon this false dichotomy between “forcing” and “drawing” fans as the excuse for importing new limitations into the claims of the ’595 and ’322 patent intended to restrict the claims to fans placed near the exit of the constricted convection channel.

The plain language of the claims, however, makes perfectly clear that Mr. Smith-Gillespie’s analysis is erroneous. Claim 9 of the ’595 patent requires a “means for forcing air through the constricted convection channel.” Its dependent claim 16 specifies that “the means for forcing air through the constricted convection channel comprises a plurality of fans placed near the *exit* of the constricted convection channel.” See ’595 Patent at 11:9-12 (emphasis added). Because claim 16 expressly requires a “forcing” fan to be “placed near the exit,” Mr. Smith-Gillespie’s conclusion that a “forcing” fan is one placed at the entrance whereas a “drawing” fan is one placed at the exit cannot be correct. Indeed, Mr. Smith-Gillespie overlooked claim 16 entirely when analyzing the ’595 and ’322 patent. See generally Ex. 19 (making no mention of claim 16 of the ’595 patent).

“[E]xpert testimony at odds with the intrinsic evidence *must* be disregarded.” *Network Commerce, Inc. v. Microsoft Corp.*, 422 F.3d 1353, 1361 (Fed. Cir. 2005) (emphasis added); see also *Homeland Housewares, LLC v. Whirlpool Corporation*, 865 F.3d 1372, 1378-79, (Fed. Cir. 2017) (disregarding expert testimony that “makes several incorrect statements with respect to the record” and “adds an additional claim requirement”). Because Mr. Smith-Gillespie’s “forcing” v. “drawing” reasoning for importing new limitations into the claims is contradicted by the claims, his testimony must be disregarded here.

The “forcing” fans v. “drawing” fans distinction Mr. Smith-Gillespie attempts to create is further dispelled by dependent claim 7 of the ’595 patent. That claim requires the “fan positioned to draw air through the constricted convection channel” of independent claim 4 to be “placed near the exit of the constricted convection channel.” Mr. Smith-Gillespie mistakenly thought this supported his opinion that any “fan positioned to draw air” must be “placed near the exit” (*see* Ex. 19, ¶ 62) when, in fact, it shows the opposite under the doctrine of claim differentiation. *See e.g., Phillips*, 415 F.3d at 1315 (“[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.”). Because dependent claim 7 adds the limitation that the fan is “placed near the exit of the constricted convection channel,” there is a presumption that claim 4 is *not* limited to a fan placed near the exit of the constricted channel. *Id.* The specification and prosecution history do not overcome this presumption.

The specification explains that the “means for forcing air within the system and increasing the speed at which the air travels through the constricted convection cooling channel” may be “in association with either the entrance opening 62 or the exit opening 64” and may be “one or more fans.” ’595 Patent at 6:60-67. The specification further states that the “means to force the air into the channel and increase the air speed may be . . . a fan 52 . . . associated with the exit opening 64 and may draw air from the constricted convection channel 50.” ’595 Patent at 7:39-45. Thus, the specification both (1) discloses embodiments where the cooling system’s fan is placed at the entrance or at the exit of the constricted convection channel and (2) equates “drawing” air with “forcing” air.

The prosecution history further illustrates that the disputed limitations do not require a fan placed near the exit of the constricted convection channel.

The court must “review the prosecution history from the perspective of an ordinary artisan and what he would understand from its contents.” *Blackbird Tech LLC v. ELB Electronics, Inc.*, 895 F.3d 1374, 1378 (Fed. Cir. 2018). Just as Respondents’ expert overlooked dependent claim 16 of the ’595 patent in his analysis, Mr. Smith-Gillespie also overlooked numerous statements in the file history that also contradict his analysis. *See generally* Ex. 19 (including no analysis of the prosecution history of the ’595 patent whatsoever). In contrast, Complainant’s expert, Thomas L. Credelle, assessed the prosecution history of the ’595 patent from the perspective of an ordinary artisan. *See* Ex. 23, ¶¶ 47–52. Mr. Credelle’s unrebutted testimony is that a POSITA would have understood from the patentee’s statements during prosecution that the claimed “fan placed to draw air...” could be “located near the entrance or the exit” of the constricted convection channel. *See* Ex. 23, ¶ 47, 48, 52 (emphasis added). Mr. Credelle’s analysis identifies three important points during prosecution that support this conclusion.

First, the claim term “a fan placed to draw air from outside of the housing through the constricted convection channel” was added to claim 1 of the ’595 Patent in response to the examiner’s rejection of claim 1 in view of US 6,493,440 to Gromatzky. *See* Ex. 14, at MRI-ITC-1331_0000002229. In the remarks accompanying the amendment, the patentee explained that “[t]he fan 32 of Gromatzky does not satisfy this limitation as it simply creates ‘a circular airflow path around the LCD module’ . . . Air which is outside of the housing 12 is never **ingested into the constricted convection channel** as required by the claim.” *Id.* at MRI-ITC-1331_0000002233 (emphasis added). A POSITA would have understood from this statement that “a fan placed to draw air from outside of the housing through the constricted convection channel” could be “located near the entrance or the exit of the channel” as long as it is one that

causes “[a]ir which is outside of the housing” to be “ingested into the constricted convection channel” *See* Ex. 23, ¶ 47.

Second, the patentee’s identification of written description support for adding the “a fan placed to draw air from outside of the housing through the constricted convection channel” limitation pointed to means for drawing the air from outside of the housing through the constricted convection channel located “(i) at the entrance of the constricted convection channel (Fig. 5E), (ii) at the exit (Fig. 5D), and (iii) in both locations (Fig. 5F).” Ex. 23, ¶ 48. This again shows a POSITA that the claimed fan “could be located near the entrance or the exit of the constricted convection channel.” *Id.*

Third, after the Examiner’s rejection of the amended claim as unpatentable over Gromatzky in view of US 5,991,153 to Heady, the patentee explained that even assuming, *arguendo*, the presence of a channel behind the backlight of Heady, the examiner’s position “would ultimately fail, as this channel never accepts air from outside of the housing, as required by the claim.” Ex. 14, at MRI-ITC-1331_0000002273–74. Mr. Credelle’s un rebutted testimony is that a POSITA would have understood that Heady’s fan 150 is “located upstream from the backlight (as a fan positioned at the entrance of the constricted convection channel of the ’595 Patent would be)” and yet the patentee “disputed whether the fan was properly placed based only on the fact that the ‘channel never accepts air from outside of the housing.’” Ex. 23, ¶ 51. If the claim had included the additional requirement that air be drawn “out of the constricted convection channel,” the patentee would have raised that point as well as Heady’s fan 150 also does not meet that requirement.

Indeed, the claims and specification demonstrate that if the patentee had wished to limit its claims to only embodiments where the fans are placed to “draw air *from* the constricted

convection channel” (i.e., draw air “out of” the constricted convection channel), it knew how to do so. *See* ’595 Patent at 7:43-45 (“...draw air *from* the constricted convection channel...”); *see also* ’595 patent claim 1 (“...draw air *from* outside of the housing...”).

Additionally, during prosecution of the ’595 patent, even though some of the claims used the term “draw” whereas others used the term “force,” the patentee explained that in each of the claims “[a]ir is forced between the posterior display surface or backlight and the constricted convection plate in order to cool the display.” *Id.* at MRI-ITC-1331_0000002162. The patentee also explained that claim 9—reciting a “means for *forcing* air through the constricted convection channel” (*see* Ex. 14, at MRI-ITC-1331_0000002145)—is “directed to the constricted convection system where air is *drawn* through the constricted convection channel.” Ex. 14, at MRI-ITC-1331_0000002162. Those terms are simply not limited in the way Respondents contend. The patentee explained that claim 9 is illustrated by Figure 9 of the ’595 patent. *Id.* The specification teaches that, in this embodiment, “a means for increasing the speed of the air traveling through the constricted convection channel 50 may be included *either* associated with the *entrance* opening 62 or the *exit* opening 62 or *both*.” ’595 Patent at 8:26-30.

Thus, as a whole, the intrinsic record does not support Respondents’ rewriting of the claim. The presumption against construing a claim to exclude disclosed embodiments is not overcome. The presumption of claim differentiation is also not overcome. When read in light of the specification and the prosecution history it is clear that none of the claims require air to be drawn “out of” the constricted convection channel or include any other requirement that cannot be satisfied by a fan placed at the entrance of the constricted convection channel.

Claim 1 of the ’595 patent specifically requires the fan be placed so that air is drawn “from outside of the housing” and so that it goes through the constricted convection channel,

which is consistent with a fan placed at the entrance of the channel or at the exit. Claim 1 of the '322 patent specifically requires the air to be “ambient” air. Satisfaction of that limitation also does not depend on whether the fan is placed at the entrance or exit of the channel. The claim language—examined by the patent office—provides the specifics that define the scope of the invention, not the extrinsic evidence on which Respondents rely to rewrite the claims.

The Court should thus accord these claim terms their plain and ordinary meaning and reject Respondents’ proposed construction.

2. “between”

Term or Phrase	Complainant’s Proposed Construction	Respondents’ Proposed Construction
“between” (’322 Patent, claims 1, 4, 9)	Plain and ordinary meaning.	“in the space that separates”

Claim 1 of the ’322 patent is reproduced below:

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 covering the majority of the posterior display surface;
 - at least one bracket which connects the posterior display surface with the constricted convection plate; and
 - a fan placed to draw ambient air *between* the constricted convection plate and the rear posterior.

JXM-002 at 9:60-10:2.

The claim term “between” has the full scope of its ordinary and customary meaning.

There is no basis for departing from that meaning. The patentee did not act as its own

lexicographer, nor did the patentee disclaim any portion of the scope of the term in the specifications or during prosecution. JXM-002, '322 Patent, 1:45-11:13.

The ordinary and customary meaning of this term is readily apparent because the term is a non-technical, commonly understood preposition. *Acumed*, 483 F.3d at 805. There is “no facial ambiguity or obscurity” to this word. *Id.* at 738; *Info-Hold*, 783 F.3d at 1267. Thus, no further construction is required. *Finjan*, 626 F.3d at 1206–07. *See also ActiveVideo Networks*, 694 F.3d at 1326; *Rothschild Connected Devices Innovations, LLC v. Coca-Cola Co.*, No. 1:16-cv-1241, 2017 WL 5410867, at *3 (N.D. Ga. Nov. 13, 2017), *rev'd on other grounds*, 813 F. App'x 557 (Fed. Cir. 2020) (holding that “there is no reason to depart from the plain and ordinary meaning of ‘element,’” and explaining that the claim “provides sufficient context for interpreting and applying the term ‘element,’ and the proposed construction of ‘element’ to mean ‘component’ ‘merely replaces the term with a synonym that does not improve comprehension.’”).

The surrounding claim language confirms that “between” should be construed according to its plain and ordinary meaning as a preposition. In claim 1 of the '322 Patent, the term “between” is used to create a prepositional phrase modifying two objects: “a fan placed to draw ambient air *between* the *constricted convection plate* and the *rear posterior*.” JXM-002, '322 Patent, claim 1. The same is also true for the use of the term “between” in claims 4 and 9. *Id.* at claim 4 (a fan placed to draw ambient air *between* the *constricted convection plate* and the *rear posterior*); claim 9 (“a fan placed to draw ambient air *between* the *constricted convection plate* and the *posterior surface of an electronic display*”). Thus, the surrounding claim language in all claims where “between” occurs are non-technical, straight-forward prepositional clauses. Accordingly, the claim language supports the contention that “between” needs no special construction and should be afforded its plain and ordinary meaning.

Additionally, the '322 Patent specification confirms that “between” should be understood according to its plain and ordinary meaning as a preposition. The term appears ten times in the '322 specification and abstract. Each time, the term “between” functions as a preposition in a prepositional clause with two objects and adjectives that modify those objections. *See, e.g., Id.* at 2:56-57 (“... thermal resistance ***between*** the ***anterior*** and ***posterior surfaces*** . . .”); *id.* at 5:11-13 (“... maintain directed contact ***between*** the ***refrigerated air and the posterior display surface*** . . .”); *id.* at 5:18-19 (“... the constricted convection channel 50 may be ***between one-half inch*** and ***one inch.***”). In all such uses the term “between” referred to the distance separating the two objects in the prepositional phrase, whether they were physical objects or numerical values of the objects. Accordingly, a POSITA would not read the specification and believe “between” would hold any different separate meaning in the claim terms outside of its ordinary use as a preposition.

Respondents’ proposed construction of “between” to mean “in the space that separates” is unnecessary. Respondents seemingly pull this construction from the claim construction order in the District of Delaware litigation. *See, Ex. 8, at 9.* In that case, the defendant asked the court to construe “into contact with.” *Id.* The court rejected the request as it impermissibly reading in limitations from certain embodiments in the specification while ignoring others. *Id.* Instead, the court agreed with the plaintiff that the term should be given its plain and ordinary meaning. *Id.* at 9-10. The court then adopted plaintiff’s proposed definition for the plain and ordinary meaning in that case. *Id.* However, “***in*** the space that separates” is only one meaning of “between” in a prepositional clause. Instead, “between” can mean “at, into, or across the space separating (two objects or regions).” Ex. 24. Further, a claim construction in a prior district court case is not binding on another jurisdiction. *See IGT v. Bally Gaming Int’l, Inc.*, 659 F.3d 1109, 1117 n.1

(Fed. Cir. 2011); *Pfizer, Inc. v. Teva Pharms., USA, Inc.*, 429 F.3d 1364, 1376 (Fed. Cir. 2005) (holding it was not error for the lower court not to adopt a stipulated construction of a term from a prior case). Accordingly, Your Honor should not adopt the narrower plain and ordinary meaning in this case.

Additionally, Respondents appear to propose this construction of “between” to interject another improper and additional limitation into the overall claim limitation of “a fan positioned to draw air between the constricted convection plate and the posterior surface” and gain a non-infringement position. *See* [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

For these reasons, Your Honor should reject Respondents’ improper construction, “give effect to the terms chosen by the patentee,” *Helmsderfer*, 527 F.3d at 1383–84 (Fed. Cir. 2008), and give “between” its ordinary and customary meaning—a preposition referring to the space at, into, or across two objects.

3. “constricted convection plate”

Term or Phrase	Complainant’s Proposed Construction	Respondents’ Proposed Construction
“constricted convection plate” (’595 Patent: claims 1, 4, 8, 9; ’322 Patent: claims 1, 3, 4, 5, 7, 8, 9, 12, 13)	A flat structure, distinct from the housing, located to form a narrowed air flow path, thereby directing airflow to remove heat from the posterior display surface	No construction necessary; in the alternative, plain and ordinary meaning.

Claim 1 of the '595 patent is reproduced below:

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 of the housing through the constricted convection channel.

DXT-001 at 9:61-10:6.

Claim 1 of the '322 patent is reproduced below:

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 covering the majority of the posterior display surface;

at least one bracket which connects the posterior display surface with the ***constricted convection plate***; and

a fan placed to draw ambient air between the ***constricted convection plate*** and the rear posterior.

DXT-002 at 9:60-10:2.

The claims of the '595 and '322 Patents at issue in this Investigation each recite a “constricted convection plate,” which is placed behind the posterior surface of the display. The term “constricted convection plate” is not a term of art that has an ordinary and customary meaning, so MRI respectfully submits that claim construction is warranted. *See Grace Instrument Industries, LLC v. Chandler Instruments Co., LLC*, No. 2021-2370, 2023 WL 163980, at *6 (Fed. Cir. Jan. 12, 2023) (finding that a claim term “is not a term of art” and that “the intrinsic record sufficiently guides a skilled artisan to the meaning of that term”).

The Federal Circuit has repeatedly confirmed that the specification is “the single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1315 (explaining that a POSITA “is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears but in the context of the entire patent, including the specification”). “Ultimately . . . the construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” *Id.* at 1316 (internal quotations and citations omitted); *see also Trs. Of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1363 (Fed. Cir. 2016) (“The only meaning that matters in claim construction is the meaning in the context of the patent.”).

Here, the intrinsic record guides a skilled artisan to the meaning of the term as used in the ’595 and ’322 Patents. *Phillips*, 415 F.3d at 1313. Starting with the claims, a “constricted convection plate” is “placed posterior to the posterior display surface.” *E.g.*, DXT-001 (’595 Patent), claim 1. The “constricted convection plate” and “two side panels placed adjacent to the constricted convection plate and the posterior display surface” define a “constricted convection channel.” *Id.* Thus, the recited “constricted convection plate” serves to form a “constricted convection channel” behind the posterior display surface according to the express language of the claims. The other claims at issue have similar recitations.

Importantly, the “constricted convection plate” is a flat structure that is distinct from the housing. The parties agree that the preambles of claim 1 of the ’595 Patent and claim 1 of the ’322 Patent are limiting. Joint Claim Construction Statement, *Certain Outdoor and Semi-Outdoor Electronic Displays*, Inv. No. 37-TA-1331 (Jan. 25, 2023). Each of those preambles recites “A system for cooling an electronic display having a posterior display surface and ***contained within a housing*** . . .” DXT-001 (’595 Patent), claim 1 (emphasis added); DXT-002

[REDACTED]
[REDACTED]

(’322 Patent), claim 1 (emphasis added). The claimed system is “contained within a housing” and its recited elements thus are distinct from the housing in which they are contained. *See, e.g., Becton, Dickinson and Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (“Where a claim lists elements separately, the clear implication of the claim language is that those elements are distinct components of the patented invention.” (internal quotations and citations omitted)); *Engel Indus., Inc. v. Lockformer Co.*, 96 F.3d 1398, 1404-05 (Fed. Cir. 1996) (concluding that where a claim provides for two separate elements, they “logically cannot be one and the same”). And consistent with the plain import of the claims, every embodiment of the ’595 and ’322 Patents consistently includes a “constricted convection plate” that is a flat structure that is distinct from the housing, thereby buttressing the conclusion that can be drawn from the express claim language.

The intrinsic record also provides specific instruction as to what is meant by the modifier “constricted convection” that limits the recited “plate” and “channel.” Specifically, the intrinsic record makes clear that “constricted connection” occurs when air is directed through a narrowed air flow path to remove heat from the posterior display surface. Since “constricted convection” does not otherwise have an established ordinary and customary meaning in the art, the term should be construed to align with the patent’s description. *Phillips*, 415 F.3d at 1316.

The term “constricted convection plate,” and the closely related term “constricted convection channel,” were first introduced in the ’454 Provisional (Ex. 7), filed March 26, 2008. The ’454 Provisional is incorporated by reference into the specifications of the ’595 and ’322 Patents. DXT-001 (’595 Patent), 1:7-10; DXT-002 (’322 Patent), 1:9-11, 1:40-42. By virtue of the incorporation by reference, the ’454 Provisional is part of the ’595 and ’322 Patents “as if [it] were explicitly contained therein.” *Finjan LLC v. ESET, LLC*, 51 F.4th 1377, 1382 (Fed. Cir.

2022) (quoting *X2Y Attenuators, LLC v. U.S. Int’l Trade Comm’n*, 757 F.3d 1358, 1362-63 (Fed. Cir. 2014)). The claims must be read in light of the ’454 Provisional because it is part of the specification. *Id.*

The ’454 Provisional explains that the “constricted convection plate” and display posterior form a “constricted convection channel, and then describes how the system works to provide “constrictive convection cooling.” Ex. 7 (’454 Provisional), at [0032]. The provisional explains that “[a]ir is forced through the entrance opening 62 and into the constrictive convection channel 50.” *Id.* “The constrictive convection channel 50 directs the air into contact with the display posterior 22 *increasing heat transfer from the display.*” *Id.* “In addition, the *narrowing of the air flow path* by the constrictive convection channel 50 also increases the effectiveness of the heat transfer.” *Id.* (emphasis added). “After passing over the display posterior 22, the air exits the constrictive convection channel 50 through the exit opening.” *Id.* A similar description also is repeated in patent specifications. DXT-001 (’595 Patent), 6:30-39; DXT-002 (’322 Patent), 6:30-39. And this description is consistent with the plain meaning of the term “constricted” (narrowing of the air flow path)³ and “convection” (directing air flow to remove heat from the posterior display surface). Moreover, every embodiment of the ’595 and ’322 Patents describes and depicts “constricted convection” consistent with this description.

The context provided by the intrinsic record supports MRI’s proposed construction of the term “constricted convection plate” as “a flat structure, distinct from the housing, located to form a narrowed air flow path, thereby directing airflow to remove heat from the posterior display

³ Ex. 25, “**constricted**: adj. 1 a : drawn together : NARROWED, CONTRACTED (a ~ passageway).”

surface.” Indeed, this is how the patents expressly describe the configuration of the “constricted convection plate” to provide the improved cooling of the claimed invention.

Respondents instead contend that no construction is necessary, or in the alternative, that the ITC should simply apply the plain and ordinary meaning. But as stated above, “constricted convection plate” is not a term of art that has a plain and ordinary meaning. Moreover, Respondents attempt to read the claims to cover prior art systems in which the alleged “constricted convection plate” does not provide for constricted convection, and in some cases is simply part of the housing itself. Thus, there is a genuine dispute regarding what the term means in the context of the specification and claims. *O2 Micro Intern’l Ltd. V. Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008) (holding that “claim construction requires the court to determine what claim scope is appropriate in the context of the patents-in-suit”).

4. “constricted convection channel”

Term or Phrase	Complainant’s Proposed Construction	Respondents’ Proposed Construction
“constricted convection channel” (’595 Patent: claims 1, 4, 7, 9, 16)	A narrowed air flow path formed by a flat structure, distinct from the housing, through which air may flow to remove heat from the posterior display surface.	“constricted channel through which air may flow to remove heat from the posterior display surface”

Claim 1 of the ’595 patent is reproduced below:

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 of the housing through the ***constricted convection channel***.

DXT-001 at 9:61-10:6.

The claims of the '595 Patent recite a “constricted convection channel,” which is defined by the “constricted convection plate” placed behind the posterior surface of the display. MRI has already addressed the meaning of “constricted convection plate” in the section immediately above and incorporates that discussion by reference here.

The term “constricted convection channel” was previously construed in unrelated litigation involving the '595 Patent against Civiq. Ex. 8. There, the district court construed the term as “constricted channel through which air may flow to remove heat from the posterior display surface.” *Id.* at 11. This construction was disputed by the defendant before the district court but Respondents adopt it as their proposed construction here.

The district court’s construction, which Respondents propose here, is unhelpful because it simply repeats the words of the claims *ipsis verbis* (“constricted channel . . .”) without construing the meaning of those words in the context provided by the specification. *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (holding that the trial judge is not required to “repeat or restate every claim term” but instead “is a matter of resolution of disputed meanings and technical scope, to clarify and when necessary to explain what the patentee covered by the claims”). The district court’s construction is not binding in this Investigation and should not simply be adopted here. *See IGT v. Bally Gaming Int’l, Inc.*, 659 F.3d 1109, 1117 n.1 (Fed. Cir. 2011); *Pfizer, Inc. v. Teva Pharms., USA, Inc.*, 429 F.3d 1364, 1376 (Fed. Cir. 2005) (holding it

was not error for the lower court not to adopt a stipulated construction of a term from a prior case).

The intrinsic record provides clear guidance regarding the meaning of “constricted convection channel,” as detailed above in the discussion of “constricted convection plate.” Claim 1 specifies that the “constricted convection channel” is defined by the “constricted convection plate” and “two side panels placed adjacent to the constricted convection plate and the posterior display surface.” DXT-001 (’595 Patent), claim 1. Claim 4 recites “a constricted convection plate placed behind the posterior surface of the PCB, defining a constricted convection channel . . .” *Id.* Claim 9 recites “a constricted convection plate and a pair of sidewalls behind the posterior surface of the display, defining a constricted convection channel . . .” *Id.*

Describing constricted convection cooling system, the ’454 Provisional, which is incorporated by reference into the ’595 Patent specification, specifically explains that “[a]ir is forced through the entrance opening 62 and into the constrictive convection channel 50.” Ex. 7 (’454 Provisional), at [0032]. “The constrictive convection channel 50 directs the air into contact with the display posterior 22 **increasing heat transfer from the display.**” *Id.* (emphasis added). “In addition, the **narrowing of the air flow path** by the constrictive convection channel 50 also increases the effectiveness of the heat transfer.” *Id.* (emphasis added). “After passing over the display posterior 22, the air exits the constrictive convection channel 50 through the exit opening.” *Id.* A similar description is repeated in the ’595 Patent. DXT-001 (’595 Patent), 6:30-39. MRI’s proposed construction is consistent with the description provided in the intrinsic record. *Phillips*, 415 F.3d at 1316 (“Ultimately . . . the construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.”); *Trs. Of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1363

(Fed. Cir. 2016) (“The only meaning that matters in claim construction is the meaning in the context of the patent.”).

In addition, MRI’s construction is further bolstered by the plain meaning of the term “constricted” (narrowing of the air flow path)⁴ and “convection” (undisputedly, directing air flow to remove heat from the posterior display surface). The embodiments of the ’595 Patent also describe and depict “constricted convection” consistent with this description. Thus, the intrinsic record lines up and this context provides strong support for MRI’s proposed construction.

Phillips, 415 F.3d at 1315 (holding that the specification is “the single best guide to the meaning of a disputed term”).

Again, Respondents’ proposed construction simply repeats the claim language without actually construing the meaning of the term. But the term “constricted convection channel” is not a term of art and construction is warranted to clarify the meaning of the claims. Moreover, Respondents attempt to read the claims to cover prior art systems in which the alleged “constricted convection channel” does not provide for constricted convection, and in some cases is formed by the housing. Thus, there is a genuine dispute regarding what the term means in the context of the claims and specification that warrants resolution by the ALJ. *O2 Micro*, 521 F.3d at 1361 (holding that “claim construction requires the court to determine what claim scope is appropriate in the context of the patents-in-suit”).

⁴ Ex. 25, “**constricted**: adj. 1 a : drawn together : NARROWED, CONTRACTED (a ~ passageway).”

5. “posterior display surface”; “posterior surface of the electronic display”

Term or Phrase	Complainant’s Proposed Construction	Respondents’ Proposed Construction
“posterior display surface” (’595 Patent: claim 1; ’322 Patent: claim 3) “posterior surface of the electronic display” (’322 Patent: claim 9)	Plain and ordinary meaning.	“rear-facing surface of the display assembly”

Claim 1 of the ’595 patent is reproduced below:

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 of the housing through the constricted convection channel.

JXM-001 at 9:61-10:6.

Claim 9 of the ’322 patent is reproduced below:

9. A system for cooling an electronic display comprising:
 - an electronic display comprising a front display surface and a posterior surface where no electronics are mounted to the *posterior surface of the electronic display*;
 - a constricted convection plate behind the posterior surface of the display covering a majority of the posterior display surface; and
 - a means for forcing air between the constricted convection plate and the *posterior surface of the electronic display*.

JXM-002 at 10:40-49.

The meaning of the terms “posterior display surface” in Claim 1 of the ’595 patent, and “posterior surface of the electronic display” in Claim 9 of the ’322 is readily apparent. Both claims introduce an “electronic display,” and then recite a “posterior [] surface” of that electronic display. No clarification is required. *See Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998) (“Without any claim term susceptible to clarification ... there is no legitimate way to narrow the property right.”).

Any additional requirements placed on the claimed surface are described in the claims only in terms of how the surface is positioned relative to the other claimed structures, such as the constricted convection plate. For example, claim 1 of the ’595 Patent requires “a constricted convection plate behind the posterior surface of the display.” Claim 9 of the ’322 patent similarly requires “a constricted convection plate behind the posterior surface of the display.”

Respondents appear to be proposing their construction solely because it was the District of Delaware’s construction in a prior litigation, which was devised by the court ad hoc during oral argument. While the construction may have been helpful in that litigation by clarifying that the term is not limited in the way the defendant had proposed, there is no need for construction of the term in this investigation.

6. “closed loop”

Term or Phrase	Complainant’s Proposed Construction	Respondents’ Proposed Construction
“closed loop” (’595 Patent: claim 9; ’287 Patent: claims 1, 2, 4-8, 11, 12, 17-19, 21, 22; ’142 Patent: claims 1, 3, 6, 12, 15; ’740 Patent: claims 1, 5, 6, 8, 15, 16, 17, 20)	Plain and ordinary meaning.	“gas pathway within a display housing containing gas that is essentially isolated from external air”

Claim 9 of the ’595 patent is reproduced below:

9. A system for cooling an electronic display comprising:

an electronic display comprising a front display surface and a posterior surface;

a constricted convection plate and a pair of sidewalls behind the posterior surface of the display, defining a constricted convection channel having an entrance and exit;

a gaseous *closed loop* traveling across the front display surface, behind the constricted convection plate, and returning to the front display surface;

a means for propelling gas around the *closed loop*;

a means for cooling the gas in the *closed loop*; and

a means for forcing air through the constricted convection channel.

JXM-001 at 10:41-55.

Claim 12 of the ’287 Patent is reproduced below.

12. An electronic display assembly comprising:

a housing;

a liquid crystal display (LCD) positioned within the housing and having a backlight;

wherein the electronic display is coolable by a combination of a ***closed loop*** of isolated gas which circulates within the housing and an open loop of ambient air which passes through the housing and along the backlight.

JXM-003 at 7:5-12.

Claim 1 of the '142 Patent is reproduced below.

1. A cooling system for an electronic image assembly, the cooling system comprising:
 - a housing for the electronic image assembly;
 - a cover panel forming a forward portion of the housing, wherein the cover panel is located forward of, and at least some distance from, the electronic image assembly and is configured to permit viewing of images displayed at the electronic image assembly through said cover panel;
 - a ***closed loop*** airflow pathway passing through the housing, wherein said ***closed loop*** airflow passes around said electronic image assembly and is configured to accommodate circulating gas, and wherein at least a portion of said ***closed loop*** airflow pathway extends between said electronic image assembly and said cover panel;
 - an open loop airflow pathway for ambient air passing through said housing and behind said electronic image assembly;
 - at least one air circulation device positioned to force the circulating gas through the closed loop airflow pathway when activated; and
 - at least one polarizer located at an inward facing surface of said cover panel and configured to prevent at least some sunlight striking said cover panel from traveling beyond said at least one polarizer.

JXM-005 at 9:55-10:13.

Claim 1 of the '740 Patent is reproduced below.

1. An electronic display comprising:
 - an electronic image assembly having a front portion and a rear portion;
 - an open loop ambient air flow path behind the rear portion of the electronic image assembly;
 - a ***closed loop*** gas circulation path about the electronic image assembly;

a common heat exchanger located in the pathway of both the *closed loop* gas circulation path and the open loop ambient air flow path;

a gas circulation device positioned to force circulating gas through the common heat exchanger; and

an air circulation device positioned to force ambient air through the common heat exchanger.

JXM-004 at 9:54-10:9.

The claim term “closed loop” has the full scope of its ordinary and customary meaning. There is no basis for departing from that meaning. The patentee did not act as its own lexicographer, nor did the patentee disclaim any portion of the scope of the term in the specifications or during prosecution. JXM-001, ’595 Patent, 1:45-11:25; JXM-003, ’287 Patent, 1:55-8:42; JXM-004, ’740 Patent, 1:53-12:30; JXM-005, ’142 Patent, 1:57-12:30.

The ordinary and customary meaning of this term is readily apparent because the term uses non-technical, commonly understood words. *Acumed*, 483 F.3d at 805. There is “no facial ambiguity or obscurity” in any of these words. *Id.* at 738; *Info-Hold*, 783 F.3d at 1267. Thus, no further construction is required. *Finjan*, 626 F.3d at 1206–07. *See also ActiveVideo Networks*, 694 F.3d at 1326; *Rothschild Connected Devices Innovations, LLC v. Coca-Cola Co.*, No. 1:16-cv-1241, 2017 WL 5410867, at *3 (N.D. Ga. Nov. 13, 2017), *rev’d on other grounds*, 813 F. App’x 557 (Fed. Cir. 2020).

The claim language confirms that “closed loop” has its ordinary and customary meaning. The term appears in almost every claim of the ’287, ’740, and ’142 Patents.⁵ The independent claims that recite a “closed loop” of gas also recite a second airflow pathway referred to as an “open loop.” JXM-001, ’595 Patent, claim 9; JXM-003, ’287

⁵ In the ’595 Patent, the term appears only in claims 9-15, and the second airflow pathway is described as traveling through a constricted convection channel. *See* JXM-001, claim 9, 7:64-8:2.

Patent, claims 1, 12, 18, and 21; JXM-004, '740 Patent claims 1 and 17; JXM-005, '142 Patent, claims 1 and 6.⁶ In reading the surrounding language of each of these claims, it is clear that “closed loop” and “open loop”⁷ refer to two distinct pathways located in different areas within the housing. *See, e.g.*, JXM-005, '142 Patent, claim 1 (“a closed loop airflow pathway passing through the housing, wherein said closed loop airflow passes around said electronic image assembly,” and “open loop airflow pathway for ambient air passing through said housing and behind said electronic image assembly”); JXM-004, '740 Patent, claim 1 (“a closed loop gas circulation path about the electronic image assembly” and “an open loop ambient airflow path behind the rear portion of the electronic image assembly”).

The specifications of the Asserted Patents confirm this understanding of a “closed loop” airflow pathway. Each patent describes two distinct airflow pathways—a “closed loop” and “open loop” positioned differently within the housing. As an example, in one non-limiting embodiment described in the '740 Patent, the invention is described as having:

[T]wo separate flow paths for gas through an electronic display. A first flow path may be a closed loop and a second flow path may be an open loop. The closed loop path travels across the front surface of the image assembly, continues to the rear of the display, where it may enter a heat exchanger, finally returning to the front surface of the image assembly. The open loop path may draw ambient gas (ex. Ambient air) through the rear of the display (sometimes through a heat exchanger, behind an image assembly, or both) and then exhausts it out of the display housing.

⁶ The second independent claim in claim 12 of the '142 patent does not name the second airflow pathway as an “open loop” but refers to it generically as a “second airflow pathway.” JXM-005, claim 12.

⁷ Again, sometimes referred to as “constricted convection channel” or “second airflow pathway.”

JXM-004, '740 Patent, 2:37-58. *See also* JXM-003, '287 Patent, Fig. 2, Fig. 3A-3B; JXM-001, '595 Patent, 7:64-8:2. Accordingly, the term “closed loop” constitutes plain language referring to the configuration of one of two airflow pathways within a housing, and a POSITA would need no special construction to understand its meaning.

Respondents' construction is incorrect for several reasons. First, Respondents improperly import limitations into the claim term. Respondents' construction of “closed loop” to mean “gas pathway within a display housing containing gas that is essentially isolated from external air” acknowledges that “closed loop” refers to a gas pathway within a housing, then adds the limitation that the gas pathway is “*essentially isolated from external air*.” This additional limitation is already found in *other* dependent claims. *See*, JXM-003, '287 Patent, claim 4 (“The electronic display assembly of claim 1 wherein: the gas within the closed loop gas cooling chamber is isolated from the open loop of ambient air.”) Because a dependent claim is presumed to have a second, more narrow meaning than the independent claim, the term “closed loop” in the independent claims does not have this additional limitation propounded by Respondents. *See Phillips*, 415 F.3d at 1324-25 (applying the doctrine of claim differentiation in order to hold the district court erred in applying a narrow construction to an independent claim that was found in a subsequent dependent claim).

Second, the specifications do not support the contention that the closed loop is also “essentially isolated from external air.” Instead, “essentially isolated from external air” appears only in the '595 and '287 Patent specifications to describe the “isolated gas,” not the “closed loop.” *See* JXM-001, '595 Patent at 8:35-38; JXM-003, '287 Patent, 4:9-11. Instead, the specifications make clear that the “closed loop” “need not necessarily be

hermetically sealed from the external air.” JXM-001, ’595 Patent at 8:46-48; JXM-003, ’287 Patent, at 4:19-20. Instead, “[i]t is sufficient that the gas in the chamber is isolated to the extent that dust and contaminants may not substantially enter the first gas chamber.” JXM-001, ’595 Patent at 8:48-50; JXM-003, ’287 Patent, at 5:21-24.

Third, in the IPRs, Respondents argue that construing “closed loop” to mean “gas pathway within a display housing containing gas that is essentially isolated from external air” was necessary based on the prosecution history of the ’740 and ’142 Patents.⁸ *See* Ex. 10, at 17; Ex. 9, at 20. In those petitions, the Respondents argue that the claims were patentable over the prior art because the prior art did not disclose a “closed loop” and only ambient air entered and exited the display unit. *See* Ex. 10, at 17; Ex. 9, at 20; Ex. 17, at MRI-ITC-1331_0000002688-94; Ex. 18, at MRI-ITC-1331_0000006531, at 16317-19; 16443-45. However, contrary to Respondents’ statements, none of these statements rise to a disclaimer over the scope of the invention, but instead merely note that the prior art does not disclose two distinct airflow pathways as claimed by “closed loop” and “open loop.”

Fourth, Respondents appear to invoke the additional claim limitation of “essentially isolated from external air” in order to generate a non-infringement position.

For these reasons, Your Honor should reject Respondents’ improper construction, “give effect to the terms chosen by the patentee,” *Helmsderfer*, 527 F.3d at 1383–84 (Fed. Cir. 2008),

⁸ Though Respondents’ argue here that “closed loop” in the ’595 Patent should be construed to mean “gas pathway within a display housing containing gas that is essentially isolated from external air,” Respondents do not make the same argument in front of the USPTO in their *inter partes* review Petition. *See* Ex. 13, at 11-12.

and give “closed loop” its ordinary and customary meaning—one of two airflow pathway configurations located within a housing.

7. **“open loop of ambient air which passes through the housing and along the backlight”**

Term or Phrase	Complainant’s Proposed Construction	Respondents’ Proposed Construction
“open loop of ambient air which passes through the housing and along the backlight” ’287 Patent: claim 12	Plain and ordinary meaning.	“open loop of ambient air which passes through the housing and is in thermal communication with, the backlight”

Claim 12 of the ’287 Patent is reproduced below.

12. An electronic display assembly comprising:

a housing;

a liquid crystal display (LCD) positioned within the housing and having a backlight;

wherein the electronic display is coolable by a combination of a ***closed loop*** of isolated gas which circulates within the housing and an open loop of ambient air which passes through the housing and along the backlight.

JXM-003 at 7:5-12.

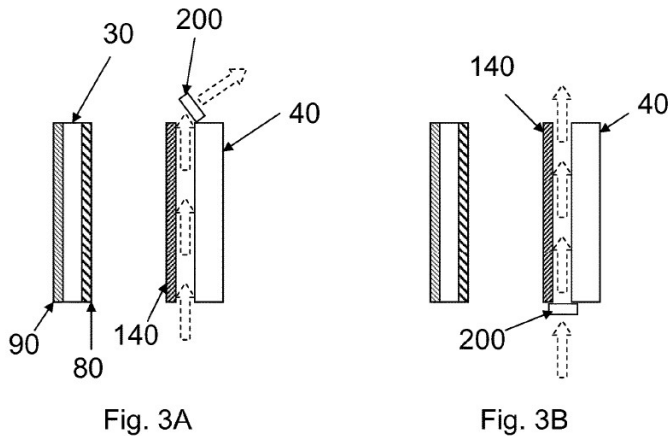
The claim term “open loop of ambient air which passes through the housing and along the backlight” has the full scope of its ordinary and customary meaning. There is no basis for departing from that meaning. The patentee did not act as its own lexicographer, nor did the patentee disclaim any portion of the scope of the term in the specifications or during prosecution. JXM-003, ’287 Patent, 1:55-8:42.

The ordinary and customary meaning of this term is readily apparent because the term uses non-technical, commonly understood words. *Acumed*, 483 F.3d at 805. There is “no facial ambiguity or obscurity” in any of these words. *Id.* at 738; *Info-Hold*, 783 F.3d at 1267. Thus, no further construction is required. *See, e.g., Finjan*, 626 F.3d at 1206–07.

The surrounding language of claim 12 confirms the term “open loop of ambient air which passes through the housing and along the backlight” should be given its plain and ordinary meaning. When read as a whole, claim 12 refers to two loops of air—an open loop and a closed loop. *See* JXM-003, ’287 Patent, claim 12 (“[W]herein the electronic display is coolable by a combination of a ***closed loop*** of isolated gas which circulates within the housing and an ***open loop*** of ambient air which passes through the housing and along the back light.”). Each airflow is followed by a dependent clause, which describes its position within the housing. *See id.* (“[W]herein the electronic display is coolable by a combination of a closed loop of isolated gas ***which circulates within the housing*** and an open loop of ambient air ***which passes through the housing and along the back light.***”). The limitation “which passes through the housing and along the backlight” uses the verb “through” and the preposition “along” to distinguish the position of the “open loop” from that of the “closed loop.” Thus, the plain and ordinary meaning “open loop of ambient air which passes through the housing and long the backlight” is exactly what the language recites itself—the position (location and direction) of the air within the open loop through the housing.⁹

⁹ This understanding is further confirmed by Dr. Pokharna, who provided an expert rebuttal declaration in this Investigation concerning the construction of “open loop of ambient air which passes through the housing and along the backlight.” *See* Pokharna Declaration at ¶¶ 34, 37-38. (“[A] POSITA in 2008 would read “open loop of ambient air which passes through the housing and along the backlight” to mean exactly what it says: the ambient air in the open loop passes through the housing and along the backlight.”).

The specification of the '287 confirms this understanding of the plain and ordinary meaning of “open loop of ambient air which passes through the housing and along the backlight.” Figure 3A and Figure 3B shows a non-limiting embodiment of claim 12. *Id.* at 4:4-5; 4:42-43.



In this figure, dotted arrows represent ambient air which passes between backlight 140 and the surface of the rear cooling chamber 40. As it does so, it passes “*along the backlight.*” Accordingly, the specification supports the understanding that the term “open loop of ambient air which passes through the housing and along the backlight” using non-technical language to describe the position of the open loop of ambient air as it travels through the housing.

Respondents’ proposed construction that “open loop of ambient air which passes through the housing and along the backlight” means “open loop of ambient air which passes through the housing and *is in thermal communication with, the backlight*” is improper. First, Respondents’ construction eliminates part of the claim limitation and replaces it with a limitation covering entirely unrelated and unsupported subject matter. Respondents’ construction eliminates the positional language of “along the backlight.” Thus making it no longer coherent with the

positional language used to describe the “closed loop” limitation immediately preceding “open loop of ambient air which passes through the housing and along the backlight.”

Respondents then insert an entirely new limitation, directed to entirely new subject matter, by stating the open loop of ambient air is “in thermal communication with, the backlight.” Nothing in the specification or other claim limitations support this transformation. Nowhere in the ’287 Patent claims, specification, or file history is there mention of the term “thermal communication.” *See also* Pokharna Declaration at ¶ 42 (“[A] POSITA would not construe “along” as “in thermal communication with,” especially in light of the absence of that phrase from anything that can be considered intrinsic evidence relating to the ’287 patent.”).

Second, Respondents support this attempt to transform claim 12 into entirely unrelated subject matter with the extrinsic evidence of an expert declaration. *See* Smith-Gillespie Declaration. However, Smith-Gillespie ignores many canons of claim construction in his analysis and makes leaps in his argument without supporting those leaps with logical connections or anything in the intrinsic record. Nowhere does Smith-Gillespie discuss the surrounding claim language or specification, all of which dominate over the prosecution history of a related patent. *Interactive Gift Exp., Inc.*, 256 F.3d at 1331.

Instead, Smith-Gillespie begins by talking about technology in a different field of the art, and then jumps straight to talking about the prosecution history of U.S. Patent No. 9,089,079 (the “’079 Patent”)—a related patent in the ’287 Patent family. *See* Smith-Gillespie Decl. at ¶¶ 72, 74-75; Pokharna Dec. at ¶¶ 35-36, 41. Smith-Gillespie explains that in the ’079 Patent, the applicant amended a term which recited “*traveling along* the rear surface of the LED backlight” to recite “*contacting* the rear surface of the LED backlight.” Smith-Gillespie Decl., at ¶ 74 (emphasis added); RESPONDENTS004095 at -4317. Smith-Gillespie then makes a sudden jump

to discussing the heat generated by backlights, thermal resistance, and cooling techniques. Smith-Gillespie Decl. at ¶ 75. However, Smith-Gillespie never provides a logical connection necessitating the transformation of a straight-forward propositional clause describing the location of the ambient airflow into a limitation claiming the thermal interaction of that airflow. Because Smith-Gillespie’s interpretation of the claim transforms the claim entirely, it is at odds with the language of the claim and specification and must be disregarded.

For these reasons, Your Honor should reject Respondents’ improper construction, “give effect to the terms chosen by the patentee,” *Helmsderfer*, 527 F.3d at 1383–84 (Fed. Cir. 2008), and give “open loop of ambient air which passes through the housing and along the backlight” its ordinary and customary meaning—an open loop of ambient air which passes through the housing and along the backlight.

IV. CONCLUSION

For the foregoing reasons, Complainant MRI respectfully requests the ALJ to enter its proposed constructions for the disputed terms.

Dated: February 1, 2023

Respectfully submitted,

/s/ Aarti Shah

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CERTIFICATE OF SERVICE

I, Pamela A. Freitik, hereby certify that the attached document has been served upon the following parties as indicated below on February 2, 2023.

The Honorable Katherine M. Hiner Acting Secretary to the Commission U.S. International Trade Commission 500 E Street SW, Room 112-A Washington, DC 20436	☒ Via EDIS ☐ Via First Class Mail ☐ Via Express Delivery ☐ Via Hand Delivery
The Honorable Monica Bhattacharyya Administrative Law Judge U.S. International Trade Commission 500 E Street SW, Room 317 Washington, DC 20436	☐ Via First Class Mail ☐ Via Express Delivery ☐ Via Hand Delivery ☒ Via Electronic Mail at Bhattacharyya337@usitc.gov
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CERTIFICATE OF SERVICE

I, Pamela A. Freitik, hereby certify that the attached document has been served upon the following parties as indicated below on February 6, 2023.

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