UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF FLORIDA
WEST PALM BEACH DIVISION

OLLNOVA TECHNOLOGIES LTD., Plaintiff, v. CARRIER GLOBAL CORPORATION, Defendant.	Case No. 9:22-cv-80388-DMM JURY TRIAL DEMANDED

PLAINTIFF OLLNOVA TECHNOLOGIES LTD.'S
OPENING CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

Pursuant to the Court's Scheduling Order (Dkt. No. 46), Plaintiff Ollnova Technologies Ltd. ("Ollnova") submits this opening claim construction brief concerning U.S. Patent Nos. 8,224,282 ("the '282 Patent"), 7,746,887 ("the '887 Patent"), and 8,264,371 ("the '371 Patent").

Each of defendant Carrier Global Corporation's ("Carrier") proposed constructions is contrary to Federal Circuit precedent. Carrier proposes that 21 terms should be construed as "means-plus-function," and that each of the claims with these terms is allegedly indefinite and therefore invalid. However, Carrier's arguments are not supported by the case law. Indeed, for each of these terms there is a presumption that the terms should **not** be construed as "means-plus-function." And Carrier cannot meet its burden to overcome that presumption, much less prove by clear and convincing evidence that the claims are invalid. Notably, Carrier is required to provide evidence from the perspective of a person of ordinary skill in the art ("POSITA") to meet its burden. Yet, Carrier has waived the ability to provide any expert testimony in support of its constructions because Carrier failed to serve a disclosure of expert testimony under Fed. R. Civ. P. 26(a)(2)(B) as required by the Court's Scheduling Order.[1] Dkt. No. 46 at 2. As such, Carrier's "means-plus-function" arguments must be rejected.

[1] Carrier purportedly served a disclosure pursuant to Fed. R. Civ. P. 26(a)(2)(C), which only pertains to so called "hybrid fact-expert witnesses." Carrier's purported expert, however, is a professor at the University of Notre Dame who squarely falls under Rule 26(a)(2)(B) because he was retained by Carrier to provide expert testimony in this case and is not otherwise a percipient witness to any facts in this case. *See, e.g.*, *Cruz-Guerrero v. Wal-Mart Stores E., L.P.*, No. 20-81577-CV-DMM, 2021 WL 8775838, at *3 (S.D. Fla. June 3, 2021) (noting "[b]ecause the expert witness discovery rules are designed to allow both sides in a case to prepare their cases adequately and to prevent surprise, compliance with the requirements of Rule 26 is not merely aspirational."). In the event Carrier attempts to provide expert testimony in support of its constructions, Ollnova intends to move to strike and/or otherwise preclude any such testimony.

Nor do Carrier's other proposed constructions pass muster under Federal Circuit precedent. Carrier's proposals merely seek to import language from exemplary descriptions in the specification that relate to exemplary embodiments. But the Federal Circuit makes clear that it is improper to import limitations into claim terms from embodiments described in the specification. In fact, the Federal Circuit has cautioned that this is one of the "cardinal sins of patent law." *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1320 (Fed. Cir. 2005) (*en banc*). For these reasons and as further explained below, Carrier's constructions must be rejected.

II. BACKGROUND

All three Asserted Patents are directed to improvements in communications among HVAC, security services, fire systems, and other related building automation system components. *See* '282 Patent at 1:15-23; '887 Patent at 1:6-19; and '371 Patent at 1:8-16. The components for these systems "include controllers, sensors, switches, alarms, actuators, chillers, fans, humidifiers, and/or air handling units configured to automate process control for heating, ventilation, air conditioning (HVAC), environmental air quality, safety and security, fire, hazard prevention, or other processes for a building or facility." '887 Patent at 1:11-17. "The components may detect events, sense conditions, respond to detected events or changes in conditions, and/or control operation of other devices." *Id.* at 1:20-22.

Wireless devices "may be implemented within the control scheme of a building automation system without incurring additional wiring or installation costs." '282 Patent at 1:63-66. "The devices may communicate information over a wired network and/or by wirelessly broadcasting information between and among the components." '887 Patent at 1:17-19. The Asserted Patents are all directed to improvements to problems presented by wireless communications within a building automation system, including but not limited to maximizing power conservation,

improving bandwidth efficiency, reducing network traffic, avoiding network interference, and optimizing the maintenance and operation of the system. *See, e.g.*, '282 Patent at 2:14-28, 9:30-36, 10:5-10; '887 Patent at 1:47-62; and '371 Patent at 2:7-25. Specifically, the Asserted Patents are directed to the following inventions:

- **'282 Patent:** The '282 Patent claims are directed to an automation component comprising a multi-sensor package and wireless communications component, and provides for the exchange of certain information—such as sensor control information, status data, and "wake-up"/"power-down" commands—among and between wireless devices and automation components operating within a building automation system. Ex. 5, Declaration of Vijay Madisetti ("Madisetti Decl.") ¶¶ 83-84.

- **'887 Patent:** The '887 Patent claims are directed to an improved wireless automation device comprising a controller configured to poll a sensor and selectively operate a transceiver to communicate information. Madisetti Decl. ¶¶ 40-41. Specifically, the wireless automation device is configured to transmit a most recent reading of the indicator for a sensed condition in response to detecting a change in the condition outside a predetermined range, and to suspend transmission of the most recent reading in response to detecting a change within the predetermined range. *Id.*

- **'371 Patent:** The '371 Patent claims are directed to an improved automation component capable of wireless communication that exchange "change-of-value" messages and updates. Madisetti Decl. ¶ 109.

III. LEGAL STANDARD

Claim construction is a question of law to be determined by the Court. *Markman v. Westview Instrus., Inc.*, 517 U.S. 370, 390 (1996). When construing claims, "[t]here is a <u>heavy</u>

presumption that claim terms are to be given their ordinary and customary meaning." *Aventis Pharm. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013).[2] Intrinsic evidence is the primary resource for claim construction. *See Power-One, Inc. v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1348 (Fed. Cir. 2010). "It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history." *Interactive Gift Express, Inc. v. CompuServe, Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001) (citation omitted). District courts may also consider "extrinsic evidence," such as dictionaries or technical treatises, to help understand the underlying technology and the manner in which one skilled in the art might use claim terms. *See Phillips*, 415 F.3d at 1318. Ultimately, however, "extrinsic evidence" is "less significant than the intrinsic record in determining the legally operative meaning of claim language." *Id*. at 1317.

IV. DISPUTED TERMS

A. Terms for construction

Claim terms "are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history." *Thorner v. Sony Comput. Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). "There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term either in the specification or during prosecution." *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014) (citation omitted). The standards for finding lexicography and disavowal are "exacting." *Id*. "To act as its own lexicographer, a patentee must clearly set forth a definition of the disputed claim term other than its plain and ordinary meaning" and must "clearly express an

[2] All emphasis added unless stated otherwise.

intent to redefine the term." *Id*. "Disavowal requires that the specification [or prosecution history] make[] clear that the invention does not include a particular feature, or is clearly limited to a particular form of the invention." *Id*. at 1372 (citations omitted).

While claims are read in view of the specification, of which they are a part, it is improper to read limitations from the embodiments in the specification into the claims. *Hill-Rom*, 755 F. 3d at 1371 (citation omitted). The Federal Circuit has "expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment." *Id*. Thus, "even when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction." *Id*. at 1372 (citations omitted). In addition, a claim construction that reads out preferred embodiments is improper. *See Epos Techs Ltd. v. Pegasus Techs.*, 766 F.3d 1338, 1347 (Fed. Cir. 2014)

("A claim construction that excludes a preferred embodiment is rarely, if ever correct and would require highly persuasive evidentiary support.").

i. "to selectively operate the transceiver", '887 Patent, Claim 1

Ollnova's Proposed Construction	Carrier's Proposed Construction
No construction necessary[3] Plain and ordinary meaning	To communicate information during the transmission period in response to a triggering event

Carrier cannot identify any lexicography or disavowal that warrants departing from the plain and ordinary meaning of the term "to selectively operate the transceiver." *See Thorner*, 669

[3] For terms where Ollnova has indicated that no construction is necessary, Ollnova contends that either no construction is necessary or the term should be construed according to its plain and ordinary meaning.

F.3d at 1365-67. Carrier's proposed construction also seeks to limit the term to a single embodiment of the '887 Patent, which is improper. *Hill-Rom*, 755 F. 3d at 1371; *Epos*, 766 F.3d at 1347. Specifically, Carrier's construction appears to quote the following sentence from the '887 Patent specification: "the transceiver may communicate the information during the transmission period in response to a triggering event…." '887 Patent at 10:63-65. To that end, the '887 Patent teaches that the transceiver "may" communicate information "in response to a triggering event"—not that it "must" communicate information in this manner.

To the contrary, the '887 Patent teaches that the transceiver "may" communicate information in a variety of ways. Madisetti Decl. ¶¶ 46-48. For example, the '887 Patent teaches that information may be sent in response to the use of a "counter":

> A counter may count a number of successive polling periods 336 for which a flag or triggering event has not been set, and thus a transmission of information may not have been made. If the counter exceeds a maximum, the transceiver may communicate information such as a current time during a current or successive transmission period.

'887 Patent at 11:47-50. Additionally, the '887 Patent teaches the communication of information in response to an "external control signal." *Id.* at 11:41-44 ("[t]he transceiver 216 also may transmit information in an interval or subsequent interval in which an external control signal is received from another device."). And, in direct contrast to Carrier's proposed construction, the '887 Patent also contemplates the communication of information in the *absence* of a "triggering event": "[t]he transceiver may also transmit information in response to a number of successive transmission periods in which information was not transmitted." *Id.* at 11:11-13. For these reasons, the '887 Patent is clear that the transceiver may transmit information in the absence of a "triggering event," meaning Carrier's proposed construction excludes embodiments of the invention, which is improper. Madisetti Decl. ¶¶ 46-48. Because Carrier's proposed construction

requires the communication of information to be "in response to a triggering event," Carrier's proposed construction is unduly narrow and fails to capture all embodiments of the invention.

Carrier's proposed construction also does not make sense grammatically when read in context of the surrounding claim language—"and '*to communicate information during the transmission period in response to a triggering event*' to communicate information associated with the reading of the indicator." Madisetti Decl. ¶ 49. Notably, Carrier's proposed construction requires that the transceiver "communicate information," which is repeated later in the claim limitation meaning the proposed language is redundant and renders the rest of the claim language superfluous. *See Digital-Vending Servs. Int'l, LLC v. Univ. of Phoenix, Inc.*, 672 F.3d 1270, 1275 (Fed. Cir. 2012) ("In *Phillips*, this court reinforced the importance of construing claim terms in light of the surrounding claim language, such that words in a claim are not rendered superfluous.").

Finally, Carrier's proposed construction is confusing to the jury. First, Carrier's proposed construction eviscerates the meaning of the word "selectively." Madisetti Decl. ¶ 45. Carrier's construction suggests that the transceiver actively communicates information during some "transmission period," which is a term not found in Claim 1 and is therefore confusing. Additionally, the word "selectively" means that there are periods of time where information *is not communicated*—which is not accurately captured in Carrier's construction that implies that there is always communication of information. Carrier's proposed construction also removes the word "transceiver" from the construction, which suggests that the "controller" (and not the transceiver) is communicating information, and is also confusing. Madisetti Decl. ¶ 49. Thus, because Carrier's proposed construction only injects confusion into a term that can be readily understood in light of its plain and ordinary meaning, Carrier's proposed construction should be rejected.

ii. "wherein transmission of the most recent reading of the indicator stored in the memory during the period of the transmission interval is suspended in response to detecting a change in the sensed condition within the predetermined range.", '887 Patent Claim 1

Ollnova's Proposed Construction	Carrier's Proposed Construction
No construction necessary Plain and ordinary meaning	wherein the most recent reading of the indicator stored in the memory during the period of the transmission interval is identified as pending transmission but not transmitted in response to detecting a change in the sensed condition within the predetermined range

Carrier's proposed construction seeks to include the requirement that the most recent reading of the indicator "is identified as pending transmission but not transmitted in response to detecting a change in the sensed condition within the predetermined range." There is no lexicography or disavowal by the patentee that supports Carrier's narrow construction requiring that the most recent reading be "identified as pending" prior to being "suspend[ed]" from transmission. *See Thorner*, 669 F.3d at 1365-67.

The '887 Patent uses the term "pending" in a single sentence in the specification: "[s]imilarly, the processor 214 may control the transceiver 216 to suspend the transmission of information, notwithstanding a flag being set identifying a transmission may be pending." '887 Patent at 11:8-11. This single sentence does not justify adopting Carrier's proposed construction. Madisetti Decl. ¶ 52. Notably, the '887 Patent contains a multitude of teachings regarding the "suspension" of the transmission of information, such as the most recent reading of the indicator. *Id.* ¶ 53. For example, the '887 Patent teaches:

- "Transmission of information during an interval may be suspended in response to an externally received control signal." '887 Patent at 2:24-28.
- "Similarly, a transmission of information may be suspended for periods of a transmission interval for which no change in the indicator has been identified." *Id.* at 3:36-40.

- "When the count reaches a maximum or a limit. The transceiver may be controlled to suspend the transmission of information transmission period, until the counter reaches a send limit. For example, the send limit may be set at five. During each polling period 336 in which a change in the sensed condition is determined, the indicator Vi is stored and the count incremented. The transmission of information is suspended during a transmission period 436 until the counter is increment to the send limit (i.e., 5). When the counter reaches the send limit, each of the five stored indicators Vi are communicated." *Id.* at 11:47 – 12:1.

These disclosures make clear that there is no requirement that information (such as the "most recent reading stored in memory") be "identified as pending" prior to and/or during the suspension of transmission of information by the transceiver. Madisetti Decl. ¶ 53. Rather, the '887 Patent contemplates a number of ways that the transceiver may suspend the transmission of information—for example, by suspending transmission of information in response to an "externally received control signal" or based on the use of a "counter." Indeed, these concepts are the subject of dependent claims 8, 16, and 17 and are rendered meaningless in light of Carrier's construction, which is improper. *See* '887 Patent Claims 8 ("where the transceiver is configured to transmit the most recent reading of the indicator stored in the memory in response to an externally-received transmission control signal received over the wireless network."), Claim 16 ("The wireless automation device of claim 1 comprising a counter…."), and Claim 17 ("where the most recent reading of the indicator and the at least one prior reading of the indicator are transmitted in response the counter reaching a maximum count."); *see also Ortho-McNeil Pharm., Inc. v. Mylan Lab'ys, Inc.*, 520 F.3d 1358, 1362 (Fed. Cir. 2008) (noting "this court strives to reach a claim construction that does not render claim language in dependent claims meaningless."). Thus, because Carrier's proposed construction improperly reads a limitation into the claims (namely, that information first be "identified as pending"), while also excluding other preferred embodiments (such as the use of an "externally received control signal" or use of a "counter" to determine when to suspend and transmit information), it should be rejected.

iii. "multi-sensor package", '282 Patent, Claims 1, 7, 13, 20

Ollnova's Proposed Construction	Carrier's Proposed Construction
a single packaged sensor device, not a group of individual sensors	device that contains multiple sensors, but not a group of individual sensors, configured to detect values and variables related to multiple sensed properties

Ollnova has already agreed to its proposed construction with the parties in a co-pending case. *See* Ex. 1, *Ollnova Techs. Ltd. v. Emerson Elec. Co., et al.*, No. 6:22-cv-00358-ADA, Dkt. No. 36 at 10 (W.D. Tex. Oct. 27, 2022). Ollnova's agreed-upon construction is a more proper construction based on the intrinsic evidence and, for purposes of consistency across cases, the Court should adopt Ollnova's agreed-upon construction.

While the parties generally agree that the term "multi-sensor package" refers to a single "device" and "not a group of individual sensors," Carrier's proposed construction imports additional limitations found in other clauses of the '282 Patent claims. Madisetti Decl. ¶ 86. Specifically, Carrier's definition incorporates the following clause from the '282 Patent claims:

> 1. An automation component configured for wireless communication within a building automation system, the automation component comprising:
>
> a **multi-sensor package** configured <u>to detect a plurality of variables and generate sensor data for each detected variable</u>….

Carrier's proposed construction imports the requirement that the "multi-sensor package" be "configured to detect values and variables <u>related to multiple sensed properties</u>," which renders the rest of the relevant claim limitations emphasized above redundant and superfluous, and is improper. *See, e.g.*, *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1238 (Fed. Cir. 2016) (rejecting proposed construction because "construing a claim term to include features of that term that are already recited in the claims would make those expressly recited features redundant."). Carrier's proposed construction should be rejected.

iv. "sensor package", '282 Patent, Claims 1, 2, 7, 8, 13, 14

Ollnova's Proposed Construction	Carrier's Proposed Construction
No construction necessary Plain and ordinary meaning	device that contains a sensor configured to detect values and variables related to a single sensed property

There is no lexicography or disclaimer that justifies a departure from the plain and ordinary meaning of the term "sensor package." *See Thorner*, 669 F.3d at 1365-67. Carrier's proposed construction does not make sense in light of the '282 Patent claims, which are directed to "a **multi-sensor package** configured to detect a plurality of variables and generate sensor data for each detected variable." The '282 Patent claims then refer to the "multi-sensor package" as "the sensor package":

> 1. An automation component configured for wireless communication within a building automation system, the automation component comprising:
>
> **a multi-sensor package** configured to detect a plurality of variables and generate sensor data for each detected variable;
>
> a wireless communications component;
>
> a processor in communication with the wireless communications component and the sensor package;
>
> a memory in communication with the processor, the memory configured to store sensor data provided by the sensor package and computer readable instructions which are executable by the processor; wherein the computer readable instructions are programmed to …

The '282 Patent claims' recitation of "the sensor package" in later clauses of the '282 Patent claims are simply referring to the claimed "multi-sensor package," which appears first in the claim. Madisetti Decl. ¶ 89. To that end, there is no reason to provide a construction for the term—the term simply refers to the antecedent "multi-sensor package." *Id.*

Carrier seeks to create internal inconsistency within the '282 Patent claims through its conflicting proposed constructions of the term "multi-sensor package" and "sensor package." The contradictory nature of Carrier's construction is readily apparent when inserting Carrier's proposed language into Claim 1:

> 1. An automation component configured for wireless communication within a building automation system, the automation component comprising:
>
> a multi-sensor package configured **to detect *a plurality of variables* and generate sensor data for each detected variable**;
>
> a wireless communications component;
>
> a processor in communication with the wireless communications component and the [device that contains a sensor configured **to detect values and variables related to *a single sensed property***];
>
> a memory in communication with the processor, the memory configured to store sensor data provided by the [device that contains a sensor configured **to detect values and variables related to *a single sensed property***] and computer readable instructions which are executable by the processor; wherein the computer readable instructions are programmed to …

Carrier's construction requiring a "sensor package" concerning "a single sensed property" contradicts the claims' prior requirement that the "multi-sensor package" be configured "to detect *a plurality of variables*." Madisetti Decl. ¶ 90. Carrier's proposed construction should be rejected.

v. "sensor control information", '282 Patent, Claims 1, 5

Ollnova's Proposed Construction	Carrier's Proposed Construction
No construction necessary Plain and ordinary meaning	information identifying the sensor and/or sensor value driving or controlling a receiving device during a scan cycle

Carrier cannot identify any lexicography or disclaimer that supports its narrow construction. *See Thorner*, 669 F.3d at 1365-67. Carrier's proposed construction seeks to improperly limit the term "sensor control information" based on exemplary embodiments

described in the '282 Patent. Specifically, Carrier's seeks to add the requirement that the "sensor control information" relate to a "scan cycle," which is a requirement not found in Claims 1 or 5 and a limitation that should not be imported into the claims. Madisetti Decl. ¶ 93.

Carrier's proposed construction is based on a single disclosure from the '282 Patent: "[t]he communicated sensor control information provided by the receiving device identifies for the automation component 200 which sensor and/or sensor value <u>is driving or controlling the receiving device during the scan cycle</u>." '282 Patent at 9:19-22. But the concept of using "scan cycle[s]" is described in connection with the embodiment disclosed in Figure 6 of the '282 Patent. "The patentee is entitled to the full scope of his claims, and [the Federal Circuit] will not limit him to his preferred embodiment or import a limitation from the specification into the claims." *Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009). Indeed, the '282 Patent makes clear that the claims are not limited to the preferred embodiments. *See* '282 Patent at 10:30-40 ("It should be understood that various changes and modifications to the presently preferred embodiments described herein will be apparent to those skilled in the art."). To that end, the Court should reject Carrier's attempt to limit the claims to one of the preferred embodiments. Madisetti Decl. ¶ 93.

The impropriety of Carrier's narrow construction is also highlighted by the '282 Patent's broader discussion of "sensor control information" in connection with Figure 6:

> At block 606, a receiving device such as, for example, the field panel 120 may communicate sensor usage or control information to the automation component that identifies which sensor and sensor data is currently being analyzed and/or is primary or controlling the field panel 120. <u>The sensor usage or control information relates to or identifies the sensor values and routines that are controlling and driving the receiving device.</u>

'282 Patent at 9:9-16. This discussion of the "sensor control information" demonstrates that the control information *itself* does not need to only relate to a "scan cycle." While the '282 Patent

does go on to explain that this information *may* be exchanged in connection with a "scan cycle," it does not follow that the '282 Patent requires that the sensor control information be limited to the information "driving or controlling a receiving device *during a scan cycle*"—as required by Carrier's construction. This is because the "sensor control information" would exist prior to and after a scan cycle. Madisetti Decl. ¶ 94. Because it is improper to limit the term to information existing "during a scan cycle," Carrier's proposed construction should be rejected.

vi. "change-of-value" terms

Term	**Ollnova's Proposed Constructions**	**Carrier's Proposed Constructions**
"change-of-value request" '371 Patent, claims 1, 2, 6	No construction necessary Plain and ordinary meaning	communication requesting locally detected values, received values, parameters, or measurements beyond a pre-defined reporting limit
"change-of-value update" '371 Patent, claims 1, 4, 5, 6, 13, 14, 15	No construction necessary Plain and ordinary meaning	communication containing queued change-of-value messages
"change-of-value messages" '371 Patent, claims 1, 13	No construction necessary Plain and ordinary meaning	communication, that excludes change-of-value request, indicating changes in locally detected values, received values, parameters, or measurements beyond a pre-defined reporting limit
"change-of-value acknowledgement" '371 Patent, claims 1, 13	No construction necessary Plain and ordinary meaning	communication indicating receipt of changes to locally detected values, received values, parameters, or measurements beyond a predefined reporting limit

Each of Carrier's proposed constructions for the "change-of-value" terms improperly imports limitations from exemplary embodiments. In addition, each of Carrier's proposed constructions improperly excludes other embodiments described in the '371 Patent. Carrier cannot identify any definition, disclaimer, or disavowal that would support any of its constructions.

Accordingly, no construction is necessary for these terms, which are readily understood based on their plain and ordinary meaning. Madisetti Decl. ¶ 112.

A POSITA would understand these terms in the context of the claim language itself which provides context and the relationship between the different terms. *See Phillips*, 415 F.3d at 1314 ("The claims themselves provide substantial guidance as to the meaning of particular claim terms."). For example, claim 1 recites:

> process a **change-of-value request message** received via the wireless communications component;
>
> generate a **change-of-value update** in response to the **change-of-value request message**, wherein the **change-of-value update** includes a plurality of **change-of-value messages** received from a plurality of devices; and
>
> communicate the **change-of-value update** via the wireless communication component at regular intervals according to a schedule or until a **change-of-value acknowledgment** is received.

Nothing in the claim language supports Carrier's unduly narrow constructions, and no further construction is necessary to understand the terms in the context of the claim. Madisetti Decl. ¶¶ 112-113.

For the three terms aside from "change-of-value update," Carrier's proposed constructions are improper because they seek to import a limitation from the following sentence in the specification:

> The COV request message may request or direct the automation component **200** b to indicate whether any of the local detected values, received values, parameters, or measurements have changed or altered beyond a pre-defined reporting limit, e.g. COV limit.

'371 Patent at 6:44-49. This sentence is the only instance in the specification that refers to "local detected values" or a "pre-defined reporting limit," which are limitations that Carrier improperly imports into its constructions. But there is no definition or disclaimer here that supports importing

Carrier's limitations into the constructions. *See Apple Inc. v. Wi-LAN Inc.*, 25 F. 4th 960, 967 (Fed. Cir. 2022) ("Embodiments in the specification—even if there is only one embodiment—cannot limit the scope of the claims absent the patentee's words or expressions of manifest exclusion or restriction.").

In addition to improperly importing limitations from an exemplary embodiment, there are several additional reasons why Carrier's constructions contradict this sentence in the specification:

- (1) This sentence states that the COV request message "may" be used in the described manner. The specification does not state that it "must" or that the invention or claims are limited in the described manner.
- (2) The sentence states that the COV request message may "request or direct." To that end, Carrier's construction is wrong because it limits the term to "requesting" while improperly excluding the alternative of "direct[ing]" the described operation.
- (3) The sentence states that the COV request message may request or direct the automation component to "indicate." To that end, Carrier's construction is wrong because it appears to require the actual values as opposed to an indication of whether the values have changed.

Madisetti Decl. ¶¶ 119-121.

In addition to improperly importing limitations from an exemplary embodiment, Carrier's constructions improperly exclude preferred embodiments. *See Epos Techs*, 766 F.3d at 1347. For example, Carrier's constructions are based on the sentence in the specification that is part of the "Polled" Communications embodiment, but the specification continues with a separate "Push" Communications section. '371 Patent at 7:11-8:25, Figure 5; Madisetti Decl. ¶¶ 114-118. Nothing

in the description of the "Push" Communications embodiment supports Carrier's constructions, and excluding this embodiment is improper.

Finally, for the term "change-of-value update," Carrier's proposed construction is wrong because it seeks to import a "queued" limitation from the specification—Carrier seeks to require that the "change-of-value update" be a communication of "queued change-of-value messages." Carrier seeks to import this limitation from the exemplary "Push" embodiment described with respect to Figure 5. '371 Patent at 8:24-57; Madisetti Decl. ¶¶ 123-124. However, this further contradicts Carrier's proposed constructions for the other three "change-of-value" terms, which appear to be based on the exemplary "Pull" embodiment described with respect to Figure 4. The only discussion of "queued" in the specification is with respect to the exemplary "Push" embodiment described with respect to Figure 5. *Id*. A POSITA would understand that Carrier is improperly importing a "queued" limitation from the specification that is only described with respect to one exemplary embodiment. Madisetti Decl. ¶¶ 123-124. Likewise, Carrier is improperly seeking to exclude the "Polled" Communications embodiment where there is no "queued" discussion. Again, there is no definition, disclaimer, or disavowal that would support Carrier's construction here. Carrier's narrow constructions are improper and should be rejected.

B. Means-plus-function terms

"Section 112 ¶ 6 offers patent applicants two options: (1) recite, in the claim, a function without reciting structure for performing the function and limit the claims to the structure, materials, or acts disclosed in the specification (or their equivalents), in which case § 112 ¶ 6 applies, or (2) recite both a function and the structure for performing that function in the claim, in which case § 112 ¶ 6 is inapplicable." *Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1365 (Fed. Cir.

2022) (citations omitted). Limitations that invoke § 112 ¶ 6 are generally known as "means-plus-function." *Id*.

"Because invoking § 112 ¶ 6 is typically a choice left to the claim drafter, we presume at the first step of the analysis that a claim limitation is subject to § 112 ¶ 6 when the claim language includes the term 'means.'" *Id*. "The inverse is also true—we presume that a claim limitation is not drafted in means-plus-function format in the absence of the term 'means.'" *Id*.

"The presumption can be overcome if a challenger demonstrates that the claim term fails to recite sufficiently definite structure." *Id*. Court's hold that "nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word 'means,' and can invoke § 112 ¶ 6."[4] *Id*. "Intrinsic evidence, such as the claims themselves and the prosecution history, can be informative in determining whether the disputed claim language recites sufficiently definite structure or was intended to invoke § 112 ¶ 6." *Id*. at 1365-66. "Claim terms need not connote a single, specific structure, and may instead describe a class of structures and still recite sufficiently definite structure to not invoke § 112 ¶ 6." *Id*. at 1366. "In cases where it is clear that a claim term itself connotes some structure to a person of ordinary skill in the art, the presumption that § 112, ¶ 6 does not apply is determinative in the absence of more compelling evidence of the understanding of one of ordinary skill in the art." *Id*.

None of the claims in the patents-in-suit include the word "means." Accordingly, the presumption is that § 112, ¶ 6 does not apply. Carrier bears the burden of overcoming the presumption, which it cannot do. Indeed, that presumption is determinative here where Carrier

[4] The Federal Circuit holds that "[g]eneric terms such as 'mechanism,' 'element,' 'device,' and other nonce words that reflect nothing more than verbal constructs may be used in a claim in a manner that is tantamount to using the word 'means' because they 'typically do not connote sufficiently definite structure' and therefore may invoke § 112, para. 6." *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015) (citation omitted).

has no contrary evidence from a POSITA. *See VDPP LLC v. Vizio, Inc.*, No. 2021-2040, 2022 WL 885771, at *3 (Fed. Cir. Mar. 25, 2022) (non-precedential) ("Vizio was required to provide at least some evidence that a person of ordinary skill would not have understood the limitations to 'recite sufficiently definite structure[s].'") (quoting *Dyfan*); *see also Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1372 (Fed. Cir. 2003) ("If the party who must bring forth evidence fails to proffer sufficient evidence to meet its burden, the presumption, either for or against the application of § 112, ¶ 6, prevails."). Moreover, none of the terms identified by Carrier are "nonce" words like "module," "mechanism," "element," or "device." And courts routinely hold that the terms at issue here are not means-plus-function.

i. "wireless automation device" / "automation component", '887 Patent Claim 1; '282 Patent, Claims 1-11, 13, 17, 19, 20; '371 Patent, Claims 1-6, 13-16

As a threshold matter, these terms only appear as part of the preambles in the claims. A preamble generally does not limit the claim, meaning there is no basis to further construe it as means-plus-function. *See Allen Eng'g Corp. v. Bartell Indus.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002) ("Generally, the preamble does not limit the claims.").[5] Here, a POSITA would understand that the claim bodies define a structurally complete invention, and the claims use the preamble only to state a purpose or intended use for the invention. Madisetti Decl. ¶¶ 57, 96, 126; *see also IMS Tech., Inc. v. Haas Automation, Inc.*, 206 F.3d 1422, 1434 (Fed. Cir. 2000) ("The phrase 'control apparatus' in the preamble merely gives a descriptive name to the set of limitations in the

[5] "In general, a preamble limits the invention if it recites essential structure or steps, or if it is necessary to give life, meaning, and vitality to the claim. Conversely, a preamble is not limiting where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (citations omitted).

body of the claim that completely set forth the invention."). Carrier cannot show that the preambles of the patents-in-suit are limiting. Thus, no construction is necessary.

Assuming Carrier were able to establish that the preambles are limiting, Carrier cannot meet its burden to overcome the presumption that the terms are not means-plus-function. These terms are not mere "nonce" words like "module" or "mechanism." Rather, the terms refer to a known class of structures as confirmed by both the intrinsic and extrinsic evidence.

First, as described in the patent specifications, the terms refer to a well-known class of devices in the context of building automation systems. Madisetti Decl. ¶¶ 58, 98, 127 (quoting the relevant portions of the specifications describing real-word examples of the automation components for use in building automation systems); *see also Dyfan*, 28 F.4th at 1366 ("[S]tructure can be recited in various ways, including through the use of a claim term with a structural definition that is either provided in the specification or generally known in the art ...."). Second, the claims delineate the components that comprise the "automation component," how those components are connected to one another, and describe how the structural components interact with each other. Madisetti Decl. ¶¶ 59, 99, 128. Courts hold that terms are not means-plus-function where the claim delineates the components the term is connected to and describes how it interacts with those components. *See Inventio AG v. ThyssenKrupp Elevator Ams. Corp.*, 649 F.3d 1350, 1359 (Fed. Cir. 2011) (holding "modernizing device" denoted sufficient structure based on surrounding claim language that "delineate the components that the modernizing device is connected to, describe how the modernizing device interacts with those components, and describe the processing that the modernizing device performs"). Finally, the extrinsic evidence, including Carrier's own patents, describe "automation components" as a known class of structures in the context of building

automation systems. Madisetti Decl. ¶¶ 62, 102, 131. Thus, the preambles reciting a "wireless automation device" and "automation component" are not means-plus-function limitations.

ii. "transceiver", '887 Patent, Claim 1

Carrier cannot meet its burden to overcome the presumption that the term "transceiver" is not means-plus-function. The term is not a mere "nonce" word. Indeed, courts have previously determined that the term is "the name of a device well known in the field of communications" and is not means-plus-function. *See, e.g.*, *TQ Delta, LLC v. Comcast Cable Commc'ns, LLC*, No. 1:15-CV-00611-RGA, 2016 WL 7013481, at *10 (D. Del. Nov. 30, 2016) (holding "[t]ransceiver is not a generic term like module or device" but "[r]ather, transceiver is the name of a device well known in the field of communications."). The intrinsic and extrinsic evidence confirms that the holding of *TQ Delta* squarely applies here. First, the specification and claims teach that the transceiver is a well-known class of structures. Madisetti Decl. ¶¶ 64-67. Second, the extrinsic evidence, including multiple dictionary definitions and Carrier's own patents, also confirms that the term has structural meaning to a POSITA. Madisetti Decl. ¶¶ 68-69. In light of the overwhelming evidence, Carrier cannot establish that the term fails to provide any indication of structure to a POSITA.

iii. "controller", '887 Patent, Claim 1

Carrier cannot meet its burden to overcome the presumption that the term "controller" is not means-plus-function. The term is not a mere "nonce" word. Indeed, courts have previously determined that the term "describes a known class of structures" and is not means-plus-function. *See Sysmex Corp. v. Beckman Coulter, Inc.*, No. 19-1642-JFB-CJB, 2022 WL 1237787, at *4 (D. Del. Apr. 27, 2022) ("[T]he magistrate judge correctly pointed to case law demonstrating that 'controller' describes a known class of structures and is not merely a nonce term describing only

functions.").[6] The intrinsic and extrinsic evidence confirms that the holding of *Sysmex* squarely applies here. First, the specification and claims teach that the controller is a well-known class of structures. Madisetti Decl. ¶¶ 71-73. Second, the extrinsic evidence, including multiple dictionary definitions and Carrier's own patents, also confirms that the term has structural meaning to a POSITA. *Id.* ¶¶ 75-76. In light of the overwhelming evidence, Carrier cannot establish that the term fails to provide any indication of structure to a POSITA.

C. "Whereas" clause terms

Carrier challenges 18 claim terms from the '282 and '371 Patents as means-plus-function, which are identified in Dr. Madisetti's Declaration. *See* Madisetti Decl. ¶¶ 105, 134. All of the challenged claim terms recite functionality of the "computer readable instructions" that are "executable by the **processor**."[7] As such, Carrier is simply challenging functionality executed by the recited "processor," which refers to a well-known class of structures. Madisetti Decl. ¶¶ 107-108, 135-136. This is evidenced by the fact that all of the challenged terms appear after "computer readable instructions which are executable by the processor; *wherein* the computer readable instructions are programmed to…." in the disputed claim terms of the '282 and '371 Patents.

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[6] *See also Va. Innovation Scis., Inc. v. Amazon.com, Inc.*, No. 4:18-cv-474, 2019 WL 4259020, at *13-15 (E.D. Tex. Sept. 9, 2019) (rejecting defendants' argument that "central controller" should be construed as a means-plus-function limitation because "controller" refers to a known class of structures in the art, and nothing in the specification indicated that the claimed controller lacked structure); *Barkan Wireless IP Holdings, L.P. v. Samsung Elecs. Co.*, No. 2:18-CV-28-JRG, 2019 WL 49790, at *22-23 (E.D. Tex. Feb. 7, 2019) (same); *Maxell Ltd. v. Huawei Device USA Inc.*, 297 F. Supp. 3d 668, 748 (E.D. Tex. 2018) (same); *Sound View Innovations, LLC v. Facebook, Inc.*, No. 16-cv-116 (RGA), 2017 WL 2221177, at *5 (D. Del. May 19, 2017) ("'Controller' may be a class of structures, rather than one specific structure, and may be defined with functional terms, but that does not make it means-plus-function.").

[7] The one exception is the disputed term of '282 Patent Claim 21, which depends on method Claim 20. However, there is no reason a POSITA would construe terms in a method claim as means-plus-function. *See* Madisetti Decl. ¶ 107.

Notably, Carrier does not challenge the recited "processor" of the '282 Patent and '371 Patent as means-plus-function, which is the "structure" that performs the functionality in the challenged claim limitations. This is likely because a POSITA would understand that the term "processor" refers to a well-known class of structures. Madisetti Decl. ¶¶ 108, 137; *see also Samsung Elecs. Am., Inc. v. Prisua Eng'g Corp.*, 948 F.3d 1342, 1354 (Fed. Cir. 2020) (holding that "the Board erred in ruling that the term 'digital processing unit' does not recite structure" "reject[ing] the Board's conclusion that the term 'digital processing unit,' as used in claim 1, invoked means-plus-function claiming"); *see also VDPP*, 2022 WL 885771 ("We agree with VDPP that the district court erred in holding that the limitations 'processor' and 'storage' are subject to § 112(f)."). This is especially true where, as here, the '282 and '371 Patents expressly teach that a "processor" is a well-known class of structures in the art:

> The automation component 200 in this exemplary embodiment may include a processor 202 such as an INTEL® PENTIUM, an AMD® ATHLON™, an Atmel® ATMega, or other 8, 12, 16, 24, 32 or 64 bit classes of processors in communication with a memory 204 or storage medium.

'282 Patent at 5:57-62; *see also* '371 Patent at 5:57-62. As such, Carrier's challenges are merely to the claimed functionality of the recited "processor," which itself connotes sufficient structure, and the challenged terms are therefore not subject to means-plus-function. Madisetti Decl. ¶¶ 108, 137.

D. Certificate of correction terms

i. "chance", '887 Patent, Claim 1

Ollnova's Proposed Construction	Carrier's Proposed Construction
change	Plaintiff's claim construction of this term is improper because this limitation is not in the claims in view of the Certificate of Correction issued on February 8, 2022.

In an abundance of caution to avoid any future dispute between the parties, Ollnova requests that the Court confirm the USPTO's certificate of correction as part of claim construction.[8] The typographical error here is evident from the face of the patent and is confirmed by the prosecution history.

The February 8, 2022 certificate of correction corrected the following typographical error found in the originally published Claim 1 of the '887 Patent:

> wherein the transceiver is configured to transmit a most recent reading of the indicator stored in the memory during a period of a transmission interval in response to detecting a change in the sensed condition outside a predetermined range and wherein transmission of the most recent reading of the indicator stored in the memory during the period of the transmission interval is suspended in response to detecting a ~~chance~~ **change** in the sensed condition within the predetermined range.

Ex. 2. The '887 Patent prosecution history confirms that the claims included the correct phrase that "the transmission interval is suspended in response to detecting a change in the sensed condition within the predetermined range." Ex. 3. This was the final claim language that the USPTO issued in its February 22, 2010 Notice of Allowance. *Id.* The fact that the proper language was in the final claim set underscores that the appearance of the word "chance" in the originally published Claim 1 of the '887 Patent was a typographical error by the USPTO and would have been understood as such by a POSITA. Madisetti Decl. ¶¶ 81-82.

ii. "associated reading of the indicator", '887 Patent, Claim 1

Ollnova's Proposed Construction	Carrier's Proposed Construction

[8] *See Pavo Sols. LLC v. Kingston Tech. Co.*, 35 F. 4th 1367, 1373 (Fed. Cir. 2022) ("A district court may correct obvious minor typographical and clerical errors in patents. Correction is appropriate only if (1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the claims. The error must be evident from the face of the patent, and the determination must be made from the point of view of one skilled in the art.") (citations omitted).

associated with the reading of the indicator	Plaintiff's claim construction of this term is improper because this limitation is not in the claims in view of the Certificate of Correction issued on March 22, 2022.

In an abundance of caution to avoid any future dispute between the parties, Ollnova requests that the Court confirm the USPTO's certificate of correction as part of claim construction. The typographical error here is evident from the face of the patent, not subject to reasonable debate based on consideration of the claim language and the specification, and the prosecution history does not suggest a different interpretation.

The March 22, 2022 certificate of correction corrected the following typographical error found in the originally published Claim 1 of the '887 Patent:

> a controller configured to poll the sensor at a polling interval to read the indicator during a current period of the polling interval and to selectively operate the transceiver to communicate information associated **with the** reading of the indicator;

Ex. 4. The omission of the words "with the" was a typographical error and would not have changed a POSITA's understanding of the scope of Claim 1. Madisetti Decl. ¶¶ 78-80. For example, the related discussion in the specification states "The controller also controls the transceiver to selectively communicate information associated **with the** signal from the sensor." '887 Patent at 2:16-18. Based on this sentence, it is clearly evident to a POSITA that the omission of the words "with the" in claim 1 was merely a clerical or typographical error and the correction is not subject to reasonable debate. Madisetti Decl. ¶¶ 78-80.

V. CONCLUSION

For the forgoing reasons, Ollnova respectfully requests that the Court adopt its proposed construction for each of the disputed claim terms.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that the counsel of record who are deemed to have consented to electronic service are being served on November 4, 2022 with a copy of this document via the Court's ECF system.

/s/Joshua D. Martin
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