IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

HID GLOBAL CORPORATION, Plaintiff, v. VECTOR FLOW, INC. et al., Defendants.	C.A. No. 21-1769-GBW (CONSOLIDATED)

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MEMORANDUM OPINION

March 27, 2023
Wilmington, Delaware

GREGORY B. WILLIAMS
UNITED STATES DISTRICT JUDGE

Plaintiff HID Global Corporation ("HID") alleges that Defendant Vector Flow, Inc. ("Vector Flow") infringes United States Patent Nos. 8,234,704 ("the '704 patent") and 9,111,088 ("the '088 patent") (collectively, the "Asserted Patents"). D.I 113 at ¶ 1.[1] The Asserted Patents "relate generally to physical security systems, and more specifically to a system for integrating disparate security systems using a rules-based policy engine and normalized data format." *See, e.g.*, '704 patent at 1:24-27; '088 at 1:23-26.

Before the Court is the issue of claim construction of multiple terms across the Asserted Patents. The Court has considered the parties' joint claim construction brief and the accompanying appendix. D.I. 152; D.I. 131-1. The Court held a *Markman* hearing on March 7, 2023 (the "*Markman*," Tr. __).

I. LEGAL STANDARDS

"It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks omitted); *see also Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989) ("A claim in a patent provides the metes and bounds of the right which the patent confers on the patentee to exclude others from making, using, or selling the protected invention"). "[T]here is no magic formula or catechism for conducting claim construction." *Phillips*, 415 F.3d at 1324. The Court is free to attach the appropriate weight to appropriate sources "in light of the statutes and policies that inform patent

[1] The Court writes for the benefit of the parties and assumes their familiarity with this action.

law." *Id.* The ultimate question of the proper construction of a patent is a question of law, although subsidiary fact-finding is sometimes necessary. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837 (2015) (quoting *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996)).

"The words of a claim 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. Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (citing *Phillips*, 415 F.3d at 1312–13). A person of ordinary skill in the art "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." *Phillips*, 415 F.3d at 1313.

"When construing claim terms, the court first looks to, and primarily rely on, the intrinsic evidence, including the claims themselves, the specification, and the prosecution history of the patent, which is usually dispositive." *Sunovion Pharms., Inc. v. Teva Pharms. USA, Inc.*, 731 F.3d 1271, 1276 (Fed. Cir. 2013). "Other claims of the patent in question, both asserted and unasserted, can . . . be valuable" in discerning the meaning of a disputed claim term because "claim terms are normally used consistently throughout the patent," and so, "the usage of a term in one claim can often illuminate the meaning of the same term in other claims." *Phillips*, 415 F.3d at 1314. In addition, "[d]ifferences among claims can also be a useful guide[.]" *Id.* For example, "the 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." *Id.* at 1314-15.

In addition to the claim, the Court should analyze the specification, which "is always highly relevant to the claim construction analysis ... [as] it is the single best guide to the meaning of a disputed term." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). It is

also possible that "the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs." *Phillips*, 415 F.3d at 1316. "Even when the specification describes only a single embodiment, [however,] 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." *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (internal quotation marks omitted) (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004)). And, the specification "is not a substitute for, nor can it be used to rewrite, the chosen claim language." *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004).

The Court "should also consider the patent's prosecution history, if it is in evidence." *Markman*, 52 F.3d at 980. 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[.]" *Phillips*, 415 F.3d at 1317.

In some cases, the Court "will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or the meaning of a term in the relevant art during the relevant time period." *Teva*, 135 S. Ct. at 841. Extrinsic evidence "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Markman*, 52 F.3d at 980. Overall, while extrinsic evidence may be useful, it is "less significant than the intrinsic record in determining the legally operative meaning of claim language." *Phillips*, 415 F.3d at 1317 (internal quotation marks and citations omitted).

II. AGREED-UPON TERMS

The parties agreed upon the construction of one claim term: "Rule" / "rules" in claims 11, 14, and 15 of the '704 patent and claims 15-17 of the '088 patent is afforded its plain and ordinary meaning. D.I. 152 at 13. The Court will adopt the agreed-upon construction.

III. DISPUTED TERMS

A. "sensor"

The claim term "sensor" appears in claims 11-15 of the '704 patent and claim 15 of the '088 patent. The parties' competing proposed constructions for "sensor" are set out in the chart below:

Claim Term	HID's Construction	Vector Flow's Construction
"sensor"	Plain and ordinary meaning	"a device that responds to a physical stimulus and transmits a resulting signal" **Alternatively**: "a device that responds to a physical stimulus and makes available resulting information"

The crux of the parties' dispute is whether "sensor" is limited to a device that only responds to physical stimuli, as opposed to non-physical stimuli. HID contends that that the term "sensor" has a plain and ordinary meaning to a person of ordinary skill in the art and, thus, declines to proffer a construction. D.I. 152 at 14. Vector Flow disagrees, arguing that "sensor" must be construed by the Court "because HID erroneously seeks to expand its meaning to encompass devices that are not sensors." *Id.* at 17. Rather, Vector Flow asserts that, based on the intrinsic evidence, and corroborated by extrinsic technical dictionaries, "sensor" means "a device that responds to a physical stimulus and transmits a resulting signal." *Id.* at 15-17.

"It is axiomatic that we will not narrow a claim term beyond its plain and ordinary meaning unless there is support for the limitation in the words of the claim, the specification, or the prosecution history." *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1333 (Fed. Cir. 2013) (citations omitted). "If the intrinsic record supports several definitions of a term, the term may be construed to encompass all such consistent meanings." *Wasica Fin. GmbH v. Cont'l Auto. Sys., Inc.*, 853 F.3d 1272, 1281 (Fed. Cir. 2017) (citation omitted). "Therefore, absent a clear disavowal or alternative lexicography by a patentee, he or she 'is free to choose a broad term and expect to obtain the full scope of its plain and ordinary meaning.'" *Id.* at 1282 (quoting *Thorner*, 669 F.3d at 1367).

The Court begins its analysis with the language of the claim itself. Use of the disputed term in claim 11 of the '704 patent is instructive:

> 11. A method comprising:
>
> > interfacing in a centralized security system, a plurality of security ***sensor*** types distributed throughout a plurality of sites, each ***sensor*** type configured to respond to a corresponding type of actionable event, each ***sensor*** type provided by a different manufacturer of a plurality of manufacturers;
> >
> > accepting ***sensor*** data from each security ***sensor*** an integration module including an agent for each type of security ***sensor***, wherein the ***sensor*** data from each security ***sensor*** is embodied in a native data representation format of each respective manufacturer of the plurality of manufacturers;
> >
> > defining individual user profiles and their respective access privileges and credentials in the system;
> >
> > mapping the ***sensor*** data from each security ***sensor*** in the native data representation format of each manufacturer of the plurality of manufacturers to a common data representation format, the common data representation format including a data object and processing information for the ***sensor*** data; . . .

See '704 patent at claim 11 (emphases added).

As HID argues, nothing in the language of the claims suggest that "sensor" is limited to only those devices that respond to physical stimuli. D.I. 152 at 18-19. In fact, the claim language only requires that each sensor be "configured to respond to a corresponding type of actionable event," not solely a physical "type of actionable event." *See* '704 patent at claim 11. Moreover, the claims themselves distinguish between a "sensor" and a "physical sensor," which suggests that the two terms have distinct meanings. *See id.* at claim 15 ("The method of claim 11 further comprising representing, through a visual editor, each normalized physical sensor as an object containing one or more attributes . . ."); *see Andersen Corp. v. Fiber Composites*, LLC, 474 F.3d 1361, 1369 (Fed. Cir. 2007) (the doctrine of claim differentiation "is based on the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.") (quoting *Karlin Tech. Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971-72 (Fed. Cir. 1999)). Notably, the portion of the specification Vector Flow relies on to bolster its proposed construction explains that "[t]he system collects data and alarm events from ***physical*** sensors, monitors and/or alarms distributed throughout the monitored facilities," *see* '704 patent at 11:63-66 (emphasis added), which further suggests that "sensor" is a broad term that is not limited exclusively to responding to physical stimuli. *See Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004) ("Absent a clear disavowal in the specification or the prosecution history, the patentee is entitled to the ***full scope*** of its claim language.") (emphasis added).

More so, and contrary to Vector Flow's contention, the specification does not distinguish between the functionality of a "sensor" and the functionality of "access controls, monitors, and alarms" to suggest that "sensor" must be more than a device that responds to a stimulus. D.I. 152 at 15-16. Rather, these passages disclose that a "sensor"—as well as access controls, monitors,

and alarms—can be a component of "asset protection mechanisms," "physical security systems and devices," and "security elements," but do not otherwise indicate that every disclosed sensor must respond exclusively to physical stimuli. *See, e.g.*, '704 patent at 4:7-27, 10:60-61; '088 patent at 4:30-34. Indeed, even though the specifications of the Asserted Patents do not explicitly use the term "sensor" when referring to non-physical stimuli, a person of ordinary skill in the art would reasonably rely on the specifications' teachings of detecting software-based triggers to conclude that "sensor," in the context of the Asserted Patents, is not limited exclusively to responding to physical stimuli. *See, e.g.*, '704 patent at 4:15-18 ("These can be independent elements that are configured to detect and report different types of events, such as fire, gas leaks, intrusion, ***computer hacking***, physical proximity, and any other similar type of event."), *id.* at 12:19-25; '088 Patent at 4:34-37 (same); *see also id.* at 13:51-57. Again, this is consistent with the claim language, which only requires that each sensor be "configured to respond to a corresponding type of actionable event," *see* '704 patent at claim 11, which can include "computer hacking . . . and any other similar type of event." *Id.* at 4:15-18. Nor is there any intrinsic support for requiring a "sensor" to "transmit a resulting signal" or "make available resulting information," as Vector Flow advances. See D.I. 152 at 16-17. Rather, Vector Flow relies on extrinsic evidence, including technical dictionaries and an expert declaration, to support its contention that sensors necessarily transmit signals based on the information detected. *Id.* (citing three dictionary definitions of "sensor," *see* D.I. 131-1, Ex. 16-18, and an Expert Declaration of Stephen Gray, *see* D.I. 131-1, Ex. 21). However, a Court should not rely on extrinsic evidence where reliance on a patent's intrinsic record resolves the ambiguity surrounding a term's meaning. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996).

Vector Flow also contends that HID limited the scope of "sensor" when it "distinguish[ed] prior art on the basis that it did not disclose the claimed 'sensor devices' as required by the claims." D.I. 152 at 16. "Under the doctrine of prosecution disclaimer, a patentee may limit the meaning of a claim term by making a clear and unmistakable disavowal of scope during prosecution." *Purdue Pharma L.P. v. Endo Pharms. Inc.*, 438 F.3d 1123, 1136 (Fed. Cir. 2006). However, courts will not apply the doctrine of prosecution disclaimer unless the disclaimer is "both clear and unmistakable to one of ordinary skill in the art." *Elbex Video, Ltd. v. Sensormatic Elecs. Corp.*, 508 F.3d 1366, 1371 (Fed. Cir. 2007) (quotations omitted). Here, what minimal support Vector Flow points to does not demonstrate that HID had a clear and unmistakable intent to limit the scope of "sensor" to a device that detects only physical stimuli. *See* D.I. 131-1, Ex. 15 at 8. To be sure, in prosecuting the '704 patent, HID distinguished the prior art as failing to "teach or suggest that the system and method of integration disparate sensor devices, normalizing the sensor data and processing this normalized data through a comprehensive policy/rule system." *Id.* That is, nowhere in the cited prosecution history does HID even use the phrases "physical stimuli" or "transmits a signal," let alone language that would indicate an express intent to limit the scope of "sensor." Finding no evidence of a clear and unmistakable statement limiting "sensor" to "a device that responds to a physical stimulus and transmits a resulting signal," the Court declines to apply the doctrine of prosecution disclaimer. *See Elbex Video, Ltd.*, 508 F.3d at 1371.

Finding no evidence in the claims, specification, or prosecution history to support limiting "sensor" exclusively to responding to physical stimuli, the Court will apply the plain and ordinary meaning, which is the default in claim construction. *Phillips*, 415 F.3d at 1316. Vector Flow urges the Court to look to technical dictionaries defining "sensor," *e.g.*, "a device that responds to a physical stimulus and transmits a resulting impulse"—to ensure the term's plain and ordinary

meaning is consistent with how it is understood in the art. D.I. 152 at 16-17. While dictionary definitions can be useful in informing the Court about a technical term's generally understood meaning in the art, *see Starhome GmbH v. AT&T Mobility LLC*, 743 F.3d 849, 856 (Fed. Cir. 2014), where the dictionary definition contradicts the term's meaning as informed by the intrinsic record, the Court should not rely on the dictionary definition. *See Ruckus Wireless, Inc. v. Innovative Wireless Sols.*, LLC, 824 F.3d 999, 1003 (Fed. Cir. 2016). As the Court has already explained, the intrinsic record does not support limiting "sensor" to exclusively responding to physical stimuli or requiring that a "sensor" "transmit a resulting signal" or "make available resulting information." Accordingly, the Court will not rely on extrinsic evidence that contradicts the intrinsic record. Thus, the Court will construe "sensor" to have its plain and ordinary meaning as informed by the intrinsic record, which means "a device configured to respond to a stimulus."

B. "sensor data"

The claim term "sensor data" appears in claims 11 and 13 of the '704 patent. The parties' competing proposed constructions for "sensor data" are set out in the chart below:

Claim Term	HID's Construction	Vector Flow's Construction
"sensor data"	Plain and ordinary meaning	"the data transmitted by a sensor in response to a physical stimulus" **Alternatively**: "the data made available by a sensor in response to a physical stimulus"

Like the term "sensor" above, *see supra* Section III.A, the parties dispute whether "sensor data" is limited to the data exclusively from a response to physical stimuli. D.I. 152 at 22-23. However, as explained by the Court, there is no evidence in the claims, specification, or prosecution history to support construing "sensor" or "sensor data" to only a device, or its associated information, that exclusively detects or responds to physical stimuli. Importantly, and

once again, the portion of the specification Vector Flow relies on for its proposed construction relates to collecting data from ***physical*** sensors, as opposed to "a sensor." D.I. 152 at 22 (citing '704 patent at 11:63-66 ("The system collects data and alarm events from physical sensors, monitors and/or alarms distributed throughout the monitored facilities.")).

As such, because a term's plain and ordinary meaning is the default in claim construction, *Phillips*, 415 F.3d at 1316, the Court adopts the plain and ordinary meaning of "sensor data." Notably, both HID and Vector Flow agree that "sensor data" must come from the sensor, *see, e.g.*, D.I. 131-1, Ex. 21 at ¶¶ 33-38; D.I. 131-1, Ex. 14 at 28:4-14, although HID contends that simply defining "sensor data" as information "associated with" a sensor is sufficient. D.I. 152 at 14. However, as Vector Flow argues, information "associated with" a sensor can include its price, color, and other information that, in the context of the Asserted Patents, is clearly not contemplated to be "sensor data." *Id.* at 22-23. But that premise belies any need to further construe "sensor data" beyond the term's plain and ordinary meaning because, as Vector Flow concedes, information such as a sensor's price/cost or color "would not be considered 'sensor data' in context" of the Asserted Patents. *See Phillips*, 415 F.3d at 1313 (A person of ordinary skill in the art "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"). Therefore, the Court will construe "sensor data" to have its plain and ordinary meaning—"the data generated by a sensor in response to a stimulus."

C. "native data representation format"

The claim term "native data representation format" appears in claims 11 and 13 of the '704 patent. The parties' competing proposed constructions for "native data representation format" are set out in the chart below:

Claim Term	HID's Construction	Vector Flow's Construction
"native data representation format"	Plain and ordinary meaning	"the original format of the data transmitted by a sensor in response to a physical stimulus" **Alternatively**: "the original format of the data made available by a sensor in response to a physical stimulus" **OR** "a data format that is built into a sensor"

The parties agree that "native data representation format" should be construed to have its plain and ordinary meaning. D.I. 152 at 23-24. However, the parties dispute whether the plain and ordinary meaning of "native data representation format" refers to the data format "built into" the sensor, or merely the data format "from" a sensor. *Id.* at 23-27. While the parties agree that the term's plain and ordinary meaning shall apply, a dispute still exists as to the proper scope of "native data representation format" which requires the Court to construe the term. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008).

The Court begins its analysis with the language of the claim itself. The use of the disputed term in claim 11 of the '704 patent is representative.

11. A method comprising:

> interfacing in a centralized security system, a plurality of security sensor types distributed throughout a plurality of sites, each sensor type configured to respond to a corresponding type of actionable event, each sensor type provided by a different manufacturer of a plurality of manufacturers;
>
> accepting sensor data from each security sensor an integration module including an agent for each type of security sensor, wherein the sensor data from each security sensor is embodied in a ***native data representation format*** of each respective manufacturer of the plurality of manufacturers;

> defining individual user profiles and their respective access privileges and credentials in the system;
>
> mapping the sensor data from each security sensor in the ***native data representation format*** of each manufacturer of the plurality of manufacturers to a common data representation format, the common data representation format including a data object and processing information for the sensor data; . . .

See '704 patent at claim 11 (emphases added).

The plain language of the claim makes clear that "native data representation format" is the data format from a sensor. Claim 13 of the '704 patent further supports that "native data representation format" is the data format from a sensor. *See* '704 patent at claim 13 ("[C]onverting the native data representation format for each security sensor into XML (Extensible Markup Language) format, and wherein the native data representation format encompasses native sensor data . . ."). Contrary to Vector Flow's position, there is no intrinsic support for limiting "native data representation format" to the data derived in response "to a physical stimulus." D.I. 152 at 23; *see supra* Section III.A. Further, while the parties dispute whether "native data representation format" requires that the data format be the "original format," or "built into" the sensor, there is no intrinsic support to further construe the disputed term beyond the clear meaning recited by the claims. *See 3M Innovative Props.*, 725 F.3d at 1333. Notably, Vector Flow's proposed construction relies almost entirely on extrinsic evidence, including technical dictionary definitions and expert testimony. *See* D.I. 152 at 24-25 (citing a declaration from Vector Flow's expert, Stephen Gray, and a definition from the Microsoft Computer Dictionary). But Vector Flow has not shown a need to resort to extrinsic evidence, particularly when the claim language and specification of the '704 patent speaks to the construction. *See Vitronics Corp.*, 90 F.3d at 1584 (Fed. Cir. 1996) ("Only if there were still some genuine ambiguity in the claims, after consideration of all available intrinsic evidence, should the trial court have resorted to extrinsic evidence, such

as expert testimony, in order to construe [a] claim."). In fact, the claim language resolves any confusion as to whether "native data representation format" is the original data format from a sensor by explicitly reciting that "the sensor data from each security sensor" is embodied in the data format "of each respective manufacturer in the plurality of manufactures." *See* '704 patent at claim 11. Nor is there intrinsic support to limit "native data representation format" to the sole or exclusive data format from a sensor, as Vector Flow contends, *see* Tr. at 46-47, because independent claim 11 of the '704 patent uses the indefinite article "a" to suggest that the claimed method could include more than one data format. *See* '704 patent at claim 11; *see also United Therapeutics Corp. v. Liquidia Techs., Inc.*, No. 20-755-RGA, 2022 WL 3910252, at *16 (D. Del. Aug. 31, 2022) ("The Federal Circuit 'has repeatedly emphasized that an indefinite article 'a' or 'an' in patent parlance carries the meaning of 'one or more' in open-ended claims containing the transitional phrase 'comprising.'" (quoting *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000))).

Accordingly, the Court will adopt the plain and ordinary meaning of the term "native data representation format," which means "a data format from a sensor."

D. "individual user profiles"

The claim term "individual user profiles" appears in claim 11 of the '704 patent. The parties' competing proposed constructions for "individual user profiles" are set out in the chart below:

Claim Term	HID's Construction	Vector Flow's Construction
"individual user profiles"	Plain and ordinary meaning	"a profile corresponding to an individual user"

The parties dispute boils down to whether "individual user profiles" means a profile that uniquely corresponds to an individual user, or whether the disputed term could encompass a shared

profile for a group of multiple users. D.I. 152 at 28, 30-31. While both parties agree that "user profile" is a common term with a well-understood meaning, the Court must construe "individual user profiles" because a dispute still exists as to the extent the word "individual" modifies the disputed term. *Id.*; *see also O2 Micro*, 521 F.3d at 1360.

Starting with the claim language, claim 11 of the '704 patent recites:

> 11. A method comprising:
>
> . . .
>
> defining ***individual user profiles*** and their respective access privileges and credentials in the system;
>
> mapping the sensor data from each security sensor in the native data representation format of each manufacturer of the plurality of manufacturers to a common data representation format, the common data representation format including a data object and processing information for the sensor data;
>
> generating unique physical access privileges and credentials to exclusively map a defined user profile to a spatial hierarchy of physical sites along with security devices of the system, wherein the unique physical access credentials maintain a common representation of the user's identity across the plurality of sites and to associate specific user identities with respective actionable events;
>
> defining physical security policies of the site in the context of user profiles at all sites through actionable representations of physical, network and information technology resources of the site, wherein the security policies define standardized rule definitions through visual rules depicted by live objects that contain attributes to define their spatial relationship to the actionable representations, and that are applied to the actionable events normalized to the common data representation format to produce normalized event data; and
>
> receiving the normalized event data and applying relevant transformation and routing rules comprising condition-action sequences in order to maintain user profiles and physical security states across the plurality of sites and to resolve the actionable events through the associated specific user identities.

See '704 patent at claim 11 (emphasis added).

Turning to the '704 patent's specification, it explains that:

> [The disclosed system] also includes processes to generate unique physical access credentials to provide an exclusive mapping between an ***individual's profile*** (job,

> department, location, and so on) and an organization's spatial hierarchy of its global physical security system deployments (doors, buildings, lockers, safes, and so on). For personnel control, the integrated physical security management process 118 is configured to generate unique physical access credentials based on ***individual profiles*** to automatically assign credentials across multiple global physical security systems to overcome certain limitations (e.g., memory constraints) of standard access control systems.
>
> The disclosed system also provides processes and systems to generate unique physical access credentials for exclusive mapping between an ***individual's profile*** (job, department, location, etc) and an organizations spatial hierarchy of its global physical security system deployments (doors, buildings, etc), and generates unique access credentials based on ***individual profiles*** and automatic assignment across multiple physical security systems overcoming certain hardware/software limitations of standard access control system/hardware.

See '704 patent at 5:5-17 (emphases added).

HID contends that, contrary to Vector Flow's position, the specification's use of the word "individual" does not imply that the "profile" must be limited to a single user. D.I. 152 at 30. Rather, the specification uses "individual" as both a possessive noun, i.e., "an individual's profile," and as an adjective, i.e., referring to an "individual" or "separate" profile. *Id.* at 30. Thus, based on the '704 patent's specification, together with an understanding that "individual" is used as an adjective in claim 11 of the '704 patent, HID asserts that a person of ordinary skill in the art would understand that the scope of "individual user profiles" does "encompass a shared profile for a group of multiple users." *Id.* at 31.

When viewed in its entirety, the claim language makes clear that "individual user profiles" does not "encompass a shared profile for a group of multiple users." While HID is correct that "individual" is used as an adjective in claim 11 to indicate that user profiles are "separate," the rest of the claim language clarifies that "individual user profiles" refers to separate profiles specific to individual users. *See* '704 patent at claim 11 ("generating unique physical access privileges and credentials to exclusively map a defined user profile . . . wherein the unique physical access

credentials maintain a common representation of the user's identity across the plurality of sites and to associate specific user identities with respective actionable events"); *see also id.* at claim 11 ("receiving the normalized event data and applying relevant transformation and routing rules . . . to resolve the actionable events through the associated specific user identities."). This is consistent with the '704 patent's specification, which explains that the disclosed system "includes processes to generate unique physical access credentials to provide an exclusive mapping between an individual's profile" and the organization's global physical security system deployments. *See* '704 patent at 5:5-10; *see also id.* at 5:11-17 ("[T]he integrated physical security management process 118 is configured to generate unique physical access credentials based on individual profiles to automatically assign credentials across multiple global physical security systems."). In other words, the disclosed processes are configured to generate a unique physical access credential based on an individual user's profile. This is consistent with how a person of ordinary skill in the art would interpret "individual user profiles" based on the specification's repeated explanation that the disclosed system generates ***unique*** physical access credentials for ***exclusive*** mapping between an individual's profile and an organization's spatial hierarchy of its global physical security system deployments. *See id.* at 18:29-38 (emphases added).

Vector Flow's proposed construction most naturally aligns with the claim language, the specification, and how a person of ordinary skill in the art would understand "individual user profiles." *See Phillips*, 415 F.3d at 1316 ("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.") (quoting *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)). Accordingly, the Court will construe the term "individual user profiles" to mean "a profile corresponding to an individual user."

E. "visual rules"

The claim term "visual rules" appears in claim 11 of the '704 patent. The parties' competing proposed constructions for "visual rules" are set out in the chart below:

Claim Term	HID's Construction	Vector Flow's Construction
"visual rules"	Plain and ordinary meaning	"a rule that is visually defined and depicted in a display area by placing icons and connectors in appropriate relationships to one another"

The parties dispute whether "visual rules" is a coined term without a customary meaning in the relevant field, which would entail that the term "cannot be construed broader than the disclosure in the specification." D.I. 152 at 32-34 (quoting *Indacon, Inc. v. Facebook, Inc.*, 824 F.3d 1352, 1357 (Fed. Cir. 2016)).

A patent claim term may be a "coined term" that lacks an ordinary and customary meaning in the field. *See, e.g.*, *Iridescent Networks, Inc. v. AT&T Mobility, LLC*, 933 F.3d 1345, 1351-53 (Fed. Cir. 2019); *Indacon*, 824 F.3d at 1357 (Fed. Cir. 2016); *Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004). In such a case, the question is "whether the intrinsic evidence provides objective boundaries to the scope of the term." *Iridescent Networks*, 106 F.3d at 1353. Coined claim terms "cannot be construed broader than the disclosure in the specification." *Indacon*, 824 F.3d at 1357; *see, e.g.*, *Iridescent Networks*, 106 F.3d at 1349-53 (finding "high quality of service connection" to be a "coined" term and affirming construction limiting the term to the minimum parameters disclosed in the specification); *Irdeto*, 383 F.3d at 1300 (limiting the term "group key" to a subset of a subscriber base where the patentee informed the examiner that the terms "group" and "box" lack an ordinary meaning); *Goldenberg v. Cytogen, Inc.*, 373 F.3d 1158, 1164 (Fed. Cir. 2004) (where parties agreed that the term "marker substance" has no accepted meaning, "we construe [the term] only as broadly as is provided by the patent

itself"). However, "[t]he absence of a commonly accepted meaning . . . does not justify a narrow construction where the meaning may be ascertained from the constituent words." *Facebook, Inc. v. Blackberry Ltd.*, 2019 WL 6828359, at *9 (N.D. Cal. Dec. 13, 2019) (citing *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1372 (Fed. Cir. 2003) ("[S]imply because a phrase as a whole lacks a common meaning does not compel a court to abandon its quest for a common meaning and disregard established meanings of the individual words.")).

Vector Flow has not carried its burden of demonstrating that "visual rules" is a coined term that lacks an ordinary and customary meaning in the field. Here, the disputed term comprises the constituent words "visual" and "rules." The parties have already stipulated to, and the Court has adopted, the plain and ordinary meaning of "rules." *See supra* Section II. Further, the parties do not meaningfully dispute that the word "visual" has a plain and ordinary meaning that would be clear to a person of ordinary skill in the art. Accordingly, the Court is not persuaded that a person of ordinary skill in the art would not be able to ascertain the meaning of "visual rules" based on the meaning of the constituent words "visual" and "rules." *See Altiris, Inc.*, 318 F.3d at 1372. However, even if "visual rules" was a coined term that "cannot be construed broader than the disclosure in the specification," *Indacon*, 824 F.3d at 1357, the '704 patent's intrinsic record provides ample support consistent with the well-understood meaning of the constituent words "visual" and "rules" such that a person of ordinary skill in the art would understand the objective boundaries of the term "visual rules." *Iridescent Networks*, 106 F.3d at 1353. Claim 11 of the '704 patent recites the scope of the term "visual rules" as being "depicted by live objects that contain attributes to define their spatial relationship to the actionable representations." *See* '704 patent at claim 11. This is consistent with the '704 patent's specification, which recites that "visual rule objects contain attributes that define their spatial relationships to other building blocks that

are used to represent normalized systems, data and processes." *See id.* at 11:10-13. In other words, the '704 patent's intrinsic record demonstrates that a person of ordinary skill in the art would understand "visual rules" to mean "rules that are visually defined." *See generally id.* at 16:3-17:6.

There is also no support for limiting "visual rules" to those "visually defined and depicted in a display area by placing icons and connectors in appropriate relationships to one another." *See* D.I. 152 at 31 (citing Vector Flow's proposed construction). The portions of the specification Vector Flow relies on either do not use the term "visual rules," or are descriptions of various embodiment of the disclosed invention. *Id.* at 32-33 (citing '704 patent at 17:3-6 (explaining Figure 7), Figure 7; *id.* at 2:53-55 (explaining Figure 7); *id.* at 16:43-45 ("***In one embodiment***, the system rules are created visually through the use of a stencil of object shapes that represent physical systems, data flow and processes.") (emphasis added)). Accepting this limitation would improperly limit the scope of the disputed term to a single embodiment, i.e., Figure 7, which cannot be correct. *See Supercell Oy v. GREE, Inc.*, 2021 WL 4452082, at *4 (Fed. Cir. Sept. 29, 2021) (cautioning courts to avoid construing a term "on the basis of a single exemplary embodiment"). Moreover, the '704 patent's description of Figure 7 makes clear that Figure 7 is an embodiment of a visual policy editor that allows the system to create "visual rules" using icons and connectors in appropriate relationships to one another, not that a visual policy editor ***is*** a "visual rule." *See* '704 patent at 16:65-17:6.

Accordingly, because a term's plain and ordinary meaning is the default in claim construction, *Phillips*, 415 F.3d at 1316, the Court adopts the plain and ordinary meaning of "visual rules," which means "rules that are visually defined."

F. "live objects"

The claim term "live objects" appears in claim 11 of the '704 patent. The parties' competing proposed constructions for "live objects" are set out in the chart below:

Claim Term	HID's Construction	Vector Flow's Construction
"live objects"	Plain and ordinary meaning, meaning "stencil objects"	"stencil shapes that are used to represent normalized systems, data and processes"

The parties dispute whether the '704 patent's intrinsic record clearly defines the term "live objects." Absent evidence of lexicography or disavowal, the Court will not depart from the plain meaning of the claim terms. *Thorner*, 669 F.3d at 1365. The standard for finding lexicography is "exacting." *GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014). A patentee may act as its own lexicographer and redefine claim terms in the specification but must "clearly express an intent to redefine the term." *Thorner*, 669 F.3d at 1365 (internal quotation marks omitted).

Both parties agree that a person of ordinary skill in the art, reading the entirety of the '704 patent, would understand that the terms "stencil shapes" and "live objects" can be used interchangeably.[2] D.I. 152 at 35-36; *see also* D.I. 131-1, Ex. 3 at ¶ 77; *id.*, Ex. 21 at ¶ 60. This makes sense, considering the '704 patent's specification explains: "The visual rule objects contain attributes that define their spatial relationship to other building blocks that are used to represent normalized systems, data and processes. Such building blocks are also referred to as ***stencil shapes or live objects***." *See* '704 patent at 11:10-14 (emphasis added). Yet, under the guise of

[2] During the Markman hearing, HID notably attempted to walk back its concession that "stencil shapes" and "live objects" can be used interchangeably. *See* Tr. at 81-82. However, the Court will hold HID to what it stated in its briefing. *See* D.I. 152 at 35 ("As such, POSITAs understand that the terms "stencil shapes" and "live objects" are used interchangeably.") (citing D.I. 131-1, Ex. 3 at ¶ 77).

compromise, HID proposes that "[i]f the Court believes that it would be helpful to the factfinder, the term 'live objects' can be described as stencil object." D.I. 152 at 35. However, HID's proposal fails to include the one concession it made—that "stencil shapes" are "live objects"—and instead attempts to advance its proposed construction, "stencil objects." Notably, the '704 patent's specification separately explains "stencil objects." *See, e.g.*, '704 patent at 2:59-61, 3:26-31, 3:37-43, 16:49-51, 17:17-19, 17:22-24, 17:55-18:4; *see also id.* at Figures 8-11. But nothing in those passages supports HID's contention that "live objects" are "stencil objects." *Renishaw PLC*, 158 F.3d at 1248 ("[T]he resulting claim interpretation must, in the end, ***accord with the words chosen by the patentee*** to stake out the boundary of the claimed property.") (emphasis added).

Rather, when the specification does disclose "live objects," there is a clear and express intention by the patentee to define the disputed term. *See Phillips*, 415 F.3d at 1316 ("[T]he specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs."). "Stencil shapes" are "building blocks," which the specification defines as being "used to represent normalized systems, data and processes." *See* '704 patent at 11:10-14. The Court cannot contemplate how the patentees could more clearly express their intention to define the disputed term. *See Hill-Rom Servs.*, 755 F.3d at 1372 (holding that "refers to" generally signals an express intent to define a term). Nor does requiring that "live objects" "represent normalized systems, data and process" improperly import an embodiment into the scope of the claim, as HID contends. D.I. 152 at 37. Though true that "it is improper to read limitations from a preferred embodiment described in the specification" into the claims, where there is "a clear indication in the intrinsic record that the patentee intended the claims to be so limited," the Court will construe the disputed term consistent with that express limitation. *Liebel-Flarsheim*, 358 F.3d at 913.

Therefore, because the specification expresses a clear intent to define the term "live objects," that definition governs the Court's construction. "Live objects" is construed to mean "stencil shapes that are used to represent normalized systems, data and processes."

G. "spatial relationship"

The claim term "spatial relationship" appears in claims 11 and 15 of the '704 patent. The parties' competing proposed constructions for "spatial relationship" are set out in the chart below:

Claim Term	HID's Construction	Vector Flow's Construction
"spatial relationship"	Plain and ordinary meaning, which includes non-physical and logical relationships	"relationship in space between two items," which does not include non-physical and logical relationships

The parties agree that "spatial relationship" means "a relationship in space between two items." D.I. 152 at 38-39. However, the parties dispute whether "spatial relationship" also encompasses logical and non-physical relationships. HID argues that "the claims and specification use the term 'spatial relationship' to refer to relationships between non-physical entities, such as objects," and because a person of ordinary skill understands that "non-physical entities" in space are logical relationships, the disputed term must include physical, non-physical, and logical relationships. *Id.* Vector Flow disagrees, arguing that, by definition, a "spatial relationship" cannot encompass a non-spatial relationship such as a logical relationship. *Id.* Rather, the specification supports that "spatial relationships" must be physical relationships because relationships between "objects," as described by claims 11 and 15 of the '704 patent, are necessarily displayed on a computer screen. *Id.* at 39-40 (citing '704 patent at 11:10-13).

The Court begins its analysis with the language of the claims themselves. "Spatial relationships" is recited in claims 11 and 15 of the '704 patent as follows:

> 11. A method comprising:
>
> . . .
>
> defining physical security policies of the site in the context of user profiles at all sites through actionable representations of physical, network and information technology resources of the site, wherein the security policies define standardized rule definitions through visual rules depicted by live objects that contain attributes to define their ***spatial relationship*** to the actionable representations, and that are applied to the actionable events normalized to the common data representation format to produce normalized event data; . . .
>
> ***
>
> 15. The method of claim 11 further comprising representing, through a visual editor, each normalized physical sensor as an object containing one or more attributes that define a ***spatial relationship*** to other objects through one or more defined rules, the visual editor including a drag and drop graphical user interface component that facilitates creation of rules through interconnection of rule objects and definition of rule properties.

See '704 patent at claim 11, 15 (emphases added).

Turning to the specification, the disputed term is only recited once: "The visual rule objects contain attributes that define their ***spatial relationship*** to other building blocks that are used to represent normalized systems, data and processes." *See id.* at 11:10-13 (emphasis added). Based on the intrinsic record, the Court cannot conclude that "spatial relationship" is limited to only relationships between physical entities. The '704 patent consistently references objects that contain one or more attributes that define a "spatial relationship" to another object or building block. Both parties agree that objects and building blocks are all "virtual" in the sense that each are "implemented or created by a computer system." *See* D.I. 152 at 49 (citing D.I. 131-1, Ex. 3 at ¶ 128; D.I. 131-1, Ex. 21 at ¶ 86). Accordingly, finding nothing in the intrinsic record to otherwise limit "spatial relationships" to only relationships between physical entities, the Court construes "spatial relationships" to mean "relationship in space between two items, which can include physical, non-physical, and logical relationships." *See Wasica Fin. GmbH*, 853 F.3d at 1282.

H. "physical security"

The claim term "physical security" appears in claim 11 of the '704 patent and claims 15 and 16 of the '088 patent. The parties' competing proposed constructions for "physical security" are set out in the chart below:

Claim Term	HID's Construction	Vector Flow's Construction
"physical security"	Plain and ordinary meaning	"security of a physical site"

The parties generally agree that the plain and ordinary meaning of the term "physical security" relates to physical, as opposed to non-physical, security. D.I. 152 at 41-42; *see also* D.I. 131-1, Ex. 21 at ¶ 63 ("The concept of 'physical security' would be understood in contrast with nonphysical security measures."); D.I. 131-1, Ex. 14 at 62:17-63:8 ("[I]n that context," the claims are "talking about things related to physical security as opposed to, for example, IT data."). Thus, the essence of the parties' dispute boils down to whether adopting Vector Flow's construction would improperly import a limitation into the scope of the disputed term. D.I. 152 at 42-43.

At the outset, the Court rejects Vector Flow's invitation to construe "physical security" to include a "site" limitation. D.I. 152 at 42-43. As used throughout the '704 and '088 patents, "physical security" refers to a type or format of security, not the location or "site" of security. *See, e.g.*, '704 patent at 1:31-53 (referring to "physical security systems"); *id.* at 10:24-32 (referring to "physical security policies"); '088 patent at 10:54-56 (referring to "physical security state engine"); *id.* at 10:57-60 (referring to "physical security states"). Moreover, the term "site" is already used as a separate limitation in the relevant claims of the '704 and '088 patents. *See Promos Techs., Inc. v. Samsung Elecs. Co.*, 809 F. App'x 825, 834 (Fed. Cir. 2020) ("[I]t is generally improper to construe a patent claim so that express claim limitations or elements are rendered superfluous."). Claim 11 of the '704 patent expressly claims "defining physical security

policies of the site," and "physical security states across the plurality of sites . . ." *See* '704 patent at claim 11. Claim 15 of the '088 patent similarly claims "integrating the physical security data with the information technology (IT) data of an entity within the managed site," but later uses the disputed term to refer to "physical security states through the rule to perform an action in accordance with the rule . . ." *See* '088 patent at claim 15. Clearly, the patentees knew how to claim "site" when they desired, and did not do so for every recital of the term "physical security." *See Takeda Pharm. Co. v. Zydus Pharms. USA, Inc.*, 743 F.3d 1359, 1365 (Fed. Cir. 2014) (declining to limit claim when the inventors knew how to include those limitations "when they so desired"); *see also CFL Techs. LLC v. Osram Sylvania, Inc.*, No. 18-1445-RGA, 2022 WL 606329, at *9 (D. Del. Jan. 21, 2022).

Having rejected Vector Flow's efforts to limit "physical security" to that of a "site," the Court finds that the parties do not meaningfully dispute the scope of the term "physical security." *See U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997) (claim construction "is not an obligatory exercise in redundancy."). Both parties agree that "physical security" is disclosed in the specifications of the '704 and '088 patents as including:

> [E]quipment and processes that implement physical security measures for incidents, access control, monitoring systems, lighting, security, audits, inspection, facility management, building automation, and the like. Almost all businesses, large commercial and government facilities, and many homes utilize physical security systems to alert owners and operators about potentially harmful activities such as intrusion, theft, fire, flooding, gas leaks, and so on.

See, e.g., '704 patent at 1:31-39; '088 patent at 1:30-38; *see* D.I. 152 at 40-41.

Moreover, neither party disputes that the term "physical security" as used in the specifications of the '704 and '088 patents is consistent with the claim language. Thus, there is no genuine dispute as to proper scope of the claim term that would require the Court to further construe the term. *See ActiveVideo Networks, Inc.*, 694 F.3d at 1325-26 (finding that the district

court did not err in concluding that a term's plain and ordinary meaning applies without offering additional construction); *see also O2 Micro*, 521 F.3d at 1360. As such, the Court adopts the plain and ordinary meaning of the term "physical security," which is physical, as opposed to non-physical security, and is not limited to any site.

I. "single integration layer component"

The claim term "single integration layer component" appears in claim 15 of the '088 patent. The parties' competing proposed constructions for "single integration layer component" are set out in the chart below:

Claim Term	HID's Construction	Vector Flow's Construction
"single integration layer component"	Plain and ordinary meaning	Indefinite

The crux of the parties' dispute is whether the term "single integration layer component" is indefinite or, whether a person of ordinary skill in the art would understand, with reasonable certainty, its meaning based on the '088 patent's intrinsic record. Vector Flow contends that "single integration layer component" is indefinite "because it is unclear (1) whether 'single' describes 'integration layer' or 'component,' (2) what is the scope of a single 'integration layer' or single 'component' (as opposed to non-single) and (3) what constitutes an integration layer or component (as opposed to what is not an integration layer or component)." D.I. 152 at 45. HID disagrees, arguing that, based on the intrinsic record, the term is readily understood with reasonably certainty to mean "a system component that receives and integrates disparate proprietary data formats from respective security components." *Id.* at 44 (citing D.I. 131-1, Ex. 3 at ¶ 105).

Section 112 of the Patent Act requires that the claims of a patent "particularly point[] out and distinctly claim[] the subject matter which the inventor . . . regards as the invention." 35

U.S.C. § 112(b). The "primary purpose of the definiteness requirement" contained in § 112(b) "is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, *e.g.*, competitors of the patent owner, can determine whether or not they infringe." *All Dental Prodx, LLC v. Advantage Dental Prods., Inc.*, 309 F.3d 774, 779–80 (Fed. Cir. 2002).

"A patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). To determine indefiniteness, courts examine "the patent record—the claims, specification, and prosecution history—to ascertain if they convey to one of skill in the art with reasonable certainty the scope of the invention claimed." *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1341 (Fed. Cir. 2015). While a "'potential infringer'" need not "be able to determine ex ante if a particular act infringes the claims," the patentee must "apprise the public 'of what is still open to them[]'" such that "a person of ordinary skill in the art could determine whether or not an accused product or method infringes the claim." *Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1346-47 (Fed. Cir. 2022) (citations omitted) (internal quotations omitted). The challenger must "prov[e] indefiniteness by clear and convincing evidence." *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1365 (Fed. Cir. 2017).

Like claim construction, definiteness is a question of law, but the Court must sometimes render factual findings based on extrinsic evidence to resolve the issue of definiteness. *See Sonix Tech. Co. v. Publications Int'l, Ltd.*, 844 F.3d 1370, 1376 (Fed. Cir. 2017). "[A]ny fact critical to a holding on indefiniteness must be proven by the challenger by clear and convincing evidence." *One-E-Way, Inc. v. Int'l Trade Comm'n*, 859 F.3d 1059, 1062 (Fed. Cir. 2017) (cleaned up).

Vector Flow has not carried its burden of demonstrating, by clear and convincing evidence, that the disputed term "single integration layer component" is indefinite. First, contrary to Vector Flow's contention, the claim language is not "materially ambiguous" as to whether "single" modifies the term "component" or the term "integration layer." D.I. 152 at 45. Rather, the plain language of claim 15 of the '088 patent makes clear that "single" modifies the whole term "integration layer component." *See* '088 patent at claim 15 ("[R]eceiving, in a single integration layer component from each of the plurality of objects in the proprietary data format of a respective security component . . ."); *see also Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 792 (Fed. Cir. 2021) (citing *Hockerson-Halberstadt, Inc. v. Converse Inc.*, 183 F.3d 1369, 1374 (Fed. Cir. 1999) ("Proper claim construction . . . demands interpretation of the entire claim in context, not a single element in isolation.")).

Second, there is no merit to Vector Flow's argument that "[t]he specification fails to differentiate 'single' versus 'non-single'" integration layers or components, because "single" is a plain-English term with a well-understood meaning. *See* D.I. 152 at 45; *Brown v. 3M*, 265 F.3d 1349, 1352 (Fed. Cir. 2001) ("[Terms that] are not technical terms of art . . . do not require elaborate interpretation."). A person of ordinary skill in the art would readily understand, based on the claim language, that the process receives ***one*** integration layer component from each of the plurality of objects in the proprietary data format of a respective security component, as opposed to multiple, i.e., "non-single," integration layer components. That the '088 patent's specification broadly defines "component" to mean a "computer program, routine or subroutine that is executed on any of the server and/or client computers . . . and may be implemented as software, firmware, or programmed hardware," does not render "single integration layer component" indefinite. *See* D.I. 152 at 45; *see* '088 patent at 6:46-50. Rather, the plain language of dependent claim 15 expressly

provides objective boundaries as to what constitutes a "single integration layer component" without limiting the form that the "component" could take. *See Home Diagnostics*, 381 F.3d at 1358 ("Absent a clear disavowal in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language.").

Nor does the '088 patent fail to "clarify[y] the boundaries of what might be a 'single' 'component' that receives data from a 'plurality' of sources as claim 15 requires." *See* D.I. 152 at 48. As explained above, a person of ordinary skill in the art would understand that "single" modifies the entire phrase "integration layer component," such that claim 15 requires one integration layer component. Nor does the fact that "integration layer" is defined by the '088 patent to contain "agents and adapters" (***plural***) render "***single*** integration layer component" indefinite. The '088 patent's specification explains that:

> An integration layer contains agents and adapters with built-in intelligence for multiple physical security systems and supports extensibility through mapping of application protocols, command and data 152 formats for integration with new and emerging physical security systems. It also normalizes the communication data, commands and events from the disparate physical security systems to a common standard format.

See '088 patent at 7:59-66.

That an "integration layer" receives data from a plurality of sources is entirely consistent with the claim language, which requires that the process receive in a single integration layer component "from each of the ***plurality of objects*** in the proprietary data format of a respective security component and integrate ***disparate proprietary data formats*** for aggregation and processing in other components . . ." *See* '088 patent at claim 15 (emphases added).

Accordingly, Vector Flow has not carried its burden of demonstrating, by clear and convincing evidence, that the term is indefinite. In other words, when read in light of the entirety of the '088 patent, a person of ordinary skill in the art would be clearly informed, with reasonable

certainty, that the term "single integration layer component" has a definite meaning and scope. Thus, the Court, based on the intrinsic record, construes "single integration layer component" to mean "a system component that receives and integrates disparate proprietary data formats from respective security components for aggregation and processing in other components." *See, e.g.*, '088 patent at 7:59-66, 30:31-35.

J. "virtual objects"

The claim term "virtual objects" appears in claims 15 and 16 of the '088 patent. The parties' competing proposed constructions for "virtual objects" are set out in the chart below:

Claim Term	HID's Construction	Vector Flow's Construction
"virtual objects"	Plain and ordinary meaning	Indefinite. **Alternatively**: "a visual depiction of an object that is not real"

The crux of the parties' dispute is whether the term "virtual objects" is indefinite or, whether a person of ordinary skill in the art would understand, with reasonable certainty, its meaning based on the '088 patent's intrinsic record. Vector Flow contends that "virtual objects" is indefinite because "the ordinary meaning of the term 'object' in this context already entails that an object is virtual," and the intrinsic record fails to provide reasonable certainty to a person of ordinary skill in the art as to the distinction between "objects" and "virtual objects." D.I. 152 at 49-50. Alternatively, Vector Flow argues that "virtual objects" should be construed as "a visual depiction of an object that is not real" based on the purported plain and ordinary meanings of the terms "virtual" and "objects." *Id.* HID disagrees, arguing that, "[a]s reflected by the claims, virtual objects describe system policies, 'comprise components of executable rules,' and have relationships to the 'corresponding devices, objects and processes." *Id.* at 48. In other words,

when read in light of the intrinsic evidence, the "virtual objects" clearly informs, with reasonable certainty, those skilled in the art about the scope of the invention. *Id.* at 50-51.

Applying the same framework as detailed above, *see supra* Section III.I, the Court finds that Vector Flow has not met its burden of demonstrating, by clear and convincing evidence, that "virtual objects" is indefinite. *See BASF Corp.*, 875 F.3d at 1365. While the disputed term is never used in the '088 patent's specification, the meaning of "virtual objects" is reasonably discernible to a person of ordinary skill in the art based on the claim language. As claim 15 of the '088 patent discloses: (1) "the XML format is configured to describe system policies through the use of virtual objects," (2) virtual objects "comprise components of executable rules," and (3) there are "relationships between the virtual objects and corresponding devices, objects and processes." *See* '088 patent at claim 15. Thus, a person of ordinary skill would readily understand that "virtual objects" are components of executable rules used to describe system policies which have relationships with corresponding devices, objects, and processes.

This understanding is consistent with the '088 patent's specification, which discloses multiple types of objects. Both parties agree that these disclosed objects are all "virtual" in the sense that each are "implemented or created by a computer system." *See* D.I. 152 at 49 (citing D.I. 131-1, Ex. 3 at ¶ 128; D.I. 131-1, Ex. 21 at ¶ 86). Thus, based on the intrinsic evidence, a person of ordinary skill in the art would understand, with reasonable certainty, that the various types of objects disclosed by the '088 patent are all a type of "virtual object."

Accordingly, because a person of ordinary skill in the art would understand, with reasonable certainty, the meaning of the disputed term "virtual objects" based on the '088 patent's intrinsic record, "virtual objects" is not indefinite. As Vector Flow has not carried its burden of demonstrating, by clear and convincing evidence, that the term is indefinite, the Court construes

the disputed term to have its plain and ordinary meaning as informed by the intrinsic record. *See Phillips*, 415 F.3d at 1316. In construing "virtual objects," the Court rejects Vector Flow's alternative construction, "a visual depiction of an object that is not real," for two reasons. *See* D.I. 152 at 48, 51. First, there is no support in the intrinsic record to limit "virtual objects" to graphic depictions of objects that are "not real." In fact, the '088 patent's specification discloses multiple examples of graphical representations of objects that are real, *see* '088 patent at 21:11-16 (disclosing "a graphic of a building for a site" and "a graphic of a person for an actor or personnel within the system"), which a person of ordinary skill would understand are types of "virtual objects." *See W.L. Gore & Assocs. v. Medtronic, Inc.*, 834 F. Supp. 2d 465, 482 (E.D. Va. 2011) ("It is generally improper for this Court to construe claims in such a way as to exclude examples disclosed in the specification.") (citing *Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1276-77 (Fed. Cir. 2008)). Second, limiting "virtual objects" to "graphic depictions" would render dependent claim 16—which separately recites that "a graphical visual policy editor that processes virtual objects, and wherein the physical security states and their relationships with network resources are managed and depicted as the virtual objects"—superfluous. *Promos Techs.*, 809 F. App'x at 834.

Accordingly, finding nothing in the intrinsic record to support Vector Flow's proposed construction, nor evidence compelling a different interpretation, the Court construes "virtual objects" to have its plain and ordinary meaning, which means "components of executable rules used to describe system policies which have relationships with corresponding devices, objects, and processes."

IV. CONCLUSION

The Court will construe the disputed claim terms as described above. The Court will issue an Order consistent with this Memorandum Opinion.