



### A. General principles

The general rule is that claim terms are given their plain-and-ordinary meaning. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*); *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014), *vacated on other grounds*, 575 U.S. 959, 959 (2015) (“There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.”) (internal quotation omitted). The plain-and-ordinary meaning of a term is the “meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1313.

There are two exceptions to the general rule that claim terms are construed according to their plain-and-ordinary meaning. The first is when the patentee acts as his/her own lexicographer. The second is when the patentee disavows the full scope of the claim term either in the specification or during prosecution. *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). The Federal Circuit has counseled that “[t]he standards for finding lexicography and disavowal are exacting.” *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014). To act as his/her own lexicographer, the patentee must “clearly set forth a definition of the disputed claim term” and “clearly express an intent’ to [define] the term.” *Thorner*, 669 F.3d at 1365.

There is generally a hierarchy to the evidence courts rely on for claim construction. Courts start construction by viewing the terms as they are used in the specification and claims. *Phillips*, 415 F.3d at 1314-15. When reviewing the specification, however, courts must guard against incorporating particular examples and embodiments into the claims. *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988). Next comes the prosecution history, which can provide evidence of how the patentee and the examiner understood the claim

terms. . *Phillips*, 415 F.3d at 1317. When reviewing the prosecution history, prosecution disclaimer may preclude a patentee from recapturing a specific meaning that was clearly and unmistakably disclaimed during prosecution. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323-26 (Fed. Cir. 2003). Finally, might look to extrinsic evidence such as technical dictionaries and expert testimony, but it is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004)).

A construction of “plain and ordinary meaning” may be inadequate when a term has more than one “ordinary” meaning or when reliance on a term’s “ordinary” meaning does not resolve the parties’ dispute. *O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361 (Fed. Cir. 2008). In that case, the Court must describe what the plain-and-ordinary meaning is. *Id.*

### **B. Indefiniteness**

“[I]ndefiniteness is a question of law and in effect part of claim construction.” *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012). Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must “inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). If it does not, the claim fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 901. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application was filed. *Id.* at 911. Indefiniteness requires clear-and-convincing evidence. *Sonix Tech. Co., Ltd. v. Publications Int’l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

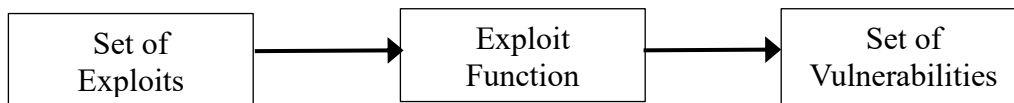
## II. DISPUTED CLAIM TERMS

### A. “a set of vulnerabilities”

Term	Skysong’s Proposed Construction	Crowdstrike’s Proposed Construction
“a set of vulnerabilities” '385 Patent, Claims 1, 8, 15	Plain and ordinary meaning	“the specific vulnerabilities that are exploited by the set of exploits”

Final Construction: Plain and ordinary meaning.

Claim 1 of the '385 Patent recites: “applying an exploit function which takes a set of exploits as input and returns a set of vulnerabilities.” The claim language is straightforward. There is an input (the set of exploits), a function (an exploit function) and an output (a set of vulnerabilities).



Crowdstrike argues its proposed construction is supported by the specification. Dkt. No. 80 at 8-9. Skysong responds that there is no lexicography or disclaimer so the term should have its plain and ordinary meaning, and Crowdstrike’s construction reads limitations from specification into the claims. Dkt. No. 88 at 7-8.

Crowdstrike’s proposed construction confuses rather than clarifies the straight-forward claim language. Crowdstrike’s proposed construction requires a direct relationship between the set of vulnerabilities (the output) and the set of exploits (the input), which ignores that the relationship between the input and output depends on the function. *See* Dkt. No. 99 at 1 (“Crowdstrike’s construction ... reinforces the direct relationship between the set of vulnerabilities and set of exploits.”). The claim language makes clear that there is a relationship

between the set of exploits and the set of vulnerabilities, but not a direct relationship divorced from the exploit function, as implied by CrowdStrike's construction.

During the claim construction hearing, CrowdStrike argued that the purpose of its proposed construction "is to tie the set of vulnerabilities to the exploit function." Dkt. No. 123 at 5, *see also id.* at 9 ("All our construction is trying to do is tie the set of vulnerabilities to the exploit function."). CrowdStrike's proposed construction, however, does not reference the exploit function so it is unclear how it ties the set of vulnerabilities to the exploit function. Further, the claim language itself very clearly ties the set of vulnerabilities to the exploit function: "applying an exploit function which takes a set of exploits as input and returns a set of vulnerabilities." '385 Patent, Claim 1. As recited in the claim, the set of vulnerabilities is the output of the exploit function when the set of exploits is taken as the input. If CrowdStrike's goal is to tie the set of vulnerabilities to the exploit function, the claim language far more clearly ties the set of vulnerabilities to the exploit function than CrowdStrike's proposed construction.

CrowdStrike relies on the specification to support its proposed construction: "The set of vulnerabilities produced by  $ExF(A)$ , for a given set of exploits  $A$ , represents the vulnerabilities that are exploited by the exploits in  $A$ ." '385 Patent at 3:61-64. But CrowdStrike's proposed construction omits a critical part of the disclosure—that the set of vulnerabilities are produced by the exploit function ( $ExF(A)$ ). Thus, the specification merely states that for a specific function the output represents the input. Again, Claim 1 clearly states the relationship between the set of exploits, the exploit function and the set of vulnerabilities.

CrowdStrike further relies on Table 2 to show a direct connection between exploits and vulnerabilities, but Table 2 is exemplary and the "Vuln." column is a general description of types

of vulnerabilities associated with a product rather than a list of specific vulnerabilities associated with a set of exploits. *See* Dkt. No. 80 at 9 (referencing '385 Patent at 9:35-50).

TABLE 2

Examples of Exploits from Darknet Markets			
Prod.	Vuln.	Target	USD
Kernel Panic	X-display system	Linux < = 3.13.0-48	\$ 471.56
IE < = 11	memory corr.	IE on Windows < = 7	\$ 36.00
RemoteShell	wpconfig.php	Wordpress MU	\$1,500.00
0 day RCE	WebView	Android 4.1, 4.2	\$ 36.50
WindowsLPE	memory corr.		
	Win32k elev.	Windows < = 8.1	\$12.00-48.17
	of priv.		
MS15-034	http.sys	Windows < = 8.1	\$ 311.07
RCE			
FUD Flash	unspec.	FlashPlayer < =	\$ 600.00
Exp.		16.0.0.287	

Lastly, Crowdstrike argues that Skysong suggests that the set of vulnerabilities can encompass any arbitrary vulnerability. Dkt. No. 99 at 1. The claim language, however, expressly limits the set of vulnerabilities to the output of the exploit function based on a set of exploits rather than any arbitrary vulnerability. '385 Patent Claim 1 (“applying an exploit function which takes a set of exploits as input and returns a set of vulnerabilities”).

For the above reasons, the Court finds that Crowdstrike’s proposed construction complicates the straight-forward claim language, and the claim term maintains its plain and ordinary meaning.

#### B. “analyzing the application of the set of exploits ...”

Term	Skysong’s Proposed Construction	Crowdstrike’s Proposed Construction
“analyzing the application of the set of	Plain and ordinary meaning	“identifying a particular vulnerability of the overlap of

<p>exploits on the computer system to detect a particular vulnerability of the computer system”</p> <p>’385 Patent, Claims 1, 15</p> <p>“analyzing an application associated with the set of exploits on the computer system to detect a particular vulnerability of the constraint set of vulnerabilities of the computer system”</p> <p>’385 Patent, Claim 8</p>		<p>vulnerabilities between the constraint set and the set of vulnerabilities”</p>
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Final Construction: Plain and ordinary meaning.

Crowdstrike argues the language of the asserted claims require the analysis of the application set to be based “on identifying the overlap of vulnerabilities between the constraint set and the set of vulnerabilities.” Dkt. No. 80 at 10. Skysong responds that Crowdstrike’s construction improperly narrows straightforward claim language to import an embodiment from the specification. Dkt. No. 88 at 10.

Claim 8 of the ’385 Patent is exemplary and recites analyzing the application of the set of exploits on the computer system and identifying a particular vulnerability of a computer system. Claim 8 also recites altering the configuration of the computer system to reduce potential cyberattack damage based on the identified vulnerability. The patent discloses an algorithm called an “over-lap payoff function” for analyzing the results and identifying specific vulnerabilities. ’385 Patent at 4:62-5:7. The claim language does not reference “overlap” and does not expressly limit how the application of exploits is analyzed or how a particular vulnerability is identified.

Crowdstrike’s proposed construction imports an “overlap” limitation into the claims. Crowdstrike argues that another claim limitation requires creating a constraint set from the set of vulnerabilities and the creation of the constraint set must be based on the overlap of vulnerabilities between the constraint set and the set of vulnerabilities. Dkt. No. 80 at 10 (referring to the “creating a constraint set limitation” of Claim 8). Crowdstrike then argues because the constraint set is created based on an overlap, this claim element must also be based on identifying an overlap. *Id.* This claim term, however, does not relate to the creation of the constraint set, but rather the analysis and detection of a vulnerability from an already created constraint set. Thus, even if Crowdstrike is correct that the constraint set is created based on an overlap, there is no basis for importing an overlap limitation into this claim term.

In the claim construction briefing, Crowdstrike conceded that the patentee did not act as a lexicographer or disavow the plain meaning of the claim term. Dkt. No. 99 at 4. Instead, Crowdstrike’s position was that the plain meaning of “the claimed analysis requires identifying a particular vulnerability of the overlap of vulnerabilities between the constraint set and the set of vulnerabilities.” *Id.* During the claim construction hearing, however, Crowdstrike argued that this term should be interpreted to require overlap because every embodiment in the specification discusses overlap, which is a disclaimer argument. Dkt. No. 123 at 12-13. The Court agrees with Crowdstrike’s original position. The specification discloses “overlap” but those disclosures do not rise to the level of lexicography or disclaimer, and thus the term should have its plain and ordinary meaning. *Thorner*, 669 F.3d at 1365.

### C. “sensitive information”

Term	Skysong’s Proposed Construction	Crowdstrike’s Proposed Construction
“sensitive information presenting a security	Not indefinite. Plain and ordinary meaning.	Indefinite. The patent provides insufficient guidance as to the

risk”		objective boundaries of this claim language.
’721 Patent, Claim 1		
“sensitive information”		
’721 Patent, Claim 16		

Final Construction: Not indefinite. Plain and ordinary meaning.

Crowdstrike argues this term is indefinite because the patent does not provide sufficient guidance as to its objective boundaries. Dkt. No. 80 at 12. Crowdstrike argues the term involves a completely subjective determination. *Id.* To establish indefiniteness, Crowdstrike has the burden to establish by clear and convincing evidence that a POSITA would not be able to understand the scope of the claim with reasonable certainty. *Nautilus*, 572 U.S. at 901.

Skysong responds that “sensitive information” is a well-known and commonly used term, and the intrinsic record provides “objective boundaries tied to claim-implemented, class-based rules that a POSITA would have understood.” *See* Dkt. No. 104 at 5.

Crowdstrike’s expert admits that Crowdstrike’s own patents and marketing materials use “sensitive information” and similar terms. Dkt. No. 99-1 at ¶75. While not dispositive, Crowdstrike’s “own ability to apply a term without unreasonable uncertainty counts against an indefiniteness contention.” *Liqwd, Inc. v. L’Oreal USA, Inc.*, 702 Fed. Appx. 623, 631 (Fed. Cir. 2018).

The claim language also associates “sensitive information” with information that presents a security risk, and the specification provides examples of sensitive information, such as banking, shopping and social networking information. *See, e.g.*, ’721 Patent, Claim 1; 6:3-25; and Figure 3.

Further the claimed invention is directed to how to protect sensitive information not what sensitive information is. If different users deem different types of information to be sensitive, it

does not make the scope of the claim uncertain. Infringement turns on how data deemed to be sensitive is protected not which types of data are deemed sensitive.

CrowdStrike relies on the *Datamize* case to argue this claim term is indefinite because individuals practicing the invention may categorize different types of data as sensitive data, and thus the term is purely subjective. Dkt. No. 80 at 12 (citing *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005)). In *Datamize*, the Federal Circuit found the term “aesthetically pleasing look” indefinite because the term “depend[s] solely on the unrestrained, subjective opinion of a particular individual.” *Datamize*, 417 F.3d at 1350. *Datamize* is distinguishable, however, because in *Datamize* infringement turned on whether variations of screen elements were in conformance with an “aesthetically pleasing look.” *Id.* As noted above, infringement of the asserted claims does not turn on whether particular information is sensitive or not, but rather how information deemed sensitive is protected. Thus, even if different individuals practicing the invention categorize different types of data as sensitive data, a POSITA would be able to understand the scope of the claim with reasonable certainty based on how the data categorized as sensitive data is protected. See *ClearOne, Inc. v. Shure Acquisition Holdings, Inc.*, 35 F.4th 1345, 1351 (Fed. Cir. 2022) (“Just because a term is susceptible to more than one meaning does not render it indefinite.”).

For the above reasons, CrowdStrike has not established by clear and convincing evidence that a POSITA would not be able to discern the scope of claim with reasonable certainty. Thus, the term is not indefinite and retains its plain and ordinary meaning.

#### D. “browser”

Term	Skysong’s Proposed Construction	CrowdStrike’s Proposed Construction
“Browser” / “Browser Instance”	Plain and ordinary meaning	“a web browser” / “an instance of a web browser”

'721 Patent, Claims 1, 7, 12		
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Final Construction: “a web browser” / “an instance of a web browser process”

Skysong concedes that the plain and ordinary meaning of “browser” in the context of the '721 Patent is a web browser. Dkt. No. 88 at 16. While Skysong argues that term does not require construction, the Court finds that it would be helpful to the jury to construe the term.

With respect to “browser instance,” Skysong argues that construing the term as “an instance of a web browser” would exclude “remote or isolated implementations” of web browsers “contemplated by '721 patent.” *Id.* Skysong fails to explain how broadly construing “an instance” of a web browser excludes some implementations or instances of a web browser.

For the above reasons, the Court construes “browser” as “a web browser” and “browser instance” as “an instance of a web browser.”

**E. “machine classifier”**

Term	Skysong’s Proposed Construction	Crowdstrike’s Proposed Construction
“machine classifier”  '900 Patent, Claims 1, 12	Plain and ordinary meaning	“a classifier that uses machine learning”

Final Construction: Plain and ordinary meaning.

The parties dispute whether “machine classifier” should be limited to classifiers that use “machine learning.” Crowdstrike does not allege lexicography or disclaimer but argues that all classifiers in the specification involve machine learning and thus the term should be construed to require machine learning. Dkt. No. 99 at 7.

Skysong disagrees and argues that the specification discloses examples of classifiers that do not use machine learning, such as classifiers that use “elastic search,” and Crowdstrike’s

construction excludes non-machine learning classifiers. Dkts. 88 at 17; 104 at 7 (citing Table 5 of the ‘900 Patent).

During the claim construction hearing, the lawyers for both parties vigorously debated whether specific examples of classifiers in the specification require machine learning, “semi-supervised” machine learning, or no machine learning. Dkt. No. 123 at 24-29. The Court finds that it is not necessary to resolve whether various examples in the specification use machine learning because even if all the examples of classifiers in the specification use machine learning, there is no basis to import “learning” into the construction of “machine classifier.” “[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” *Liebel*, 358 F.3d at 913. The Court finds there is not a clear indication in the intrinsic record that “machine classifiers” should be limited to “machine learning” classifiers.

Having resolved the parties’ dispute regarding “machine learning,” the Court finds this term should maintain its plain and ordinary meaning.

**F. “first set of most significant bits (MSBs)”**

Term	Skysong’s Proposed Construction	Crowdstrike’s Proposed Construction
“first set of most significant bits (MSBs)”  '831 Patent, Claim 1	Plain and ordinary meaning	“first set of bits containing at least the two highest-order contiguous bits, but less than all the bits, in a data set”

Final Construction: “a first set of bits containing two or more high order bits, but less than all the bits, in a data set”

Claim 1 of '831 Patent recites:

performing a first iteration that includes computing a value based on a first set of most significant bits (MSBs) for each of plurality of data sets;  
examining a first set of values ... in the first iteration to determine a maximum value ...; and  
responsive to identifying the maximum value, performing a full precision computation ... .

Thus, the claim recites performing a computation based on a subset of the bits (a set of most significant bits (MSBs)) for multiple inputs, determining the maximum value based on the first computation, and then performing a full precision computation on all the bits of that input.

The parties dispute three aspects of CrowdStrike’s proposed construction. First, the parties dispute whether “a set of ... bits” can include a single bit. Skysong argues the term includes one or more bits based on the disclosures in the specification that “data may include one or more most significant bits.” Dkt. No. 88 at 18 (quoting ’831 Patent 5:11-14). CrowdStrike replies that the plain meaning of “a set of ... bits” require at least two bits. Dkt. No. 99 at 8. The Court agrees with CrowdStrike. While the specification discloses an embodiment that uses “one or more” most significant bits, the claim language requires “a set” of bits, and the plain meaning of “a set” requires two or more. Skysong cannot rewrite the claim language based on a broader disclosure in the specification. *See Liebel*, 358 F.3d at 913.

Second, the parties dispute whether the most significant bits must be contiguous. CrowdStrike argues that using “non-contiguous” bits makes “no sense” because the claim recites performing a calculation on the most significant bits to determine a maximum value and using non-contiguous bits may lead to erroneous results—i.e., the maximum value of the first computation may not represent the largest input. Dkt. No. 99 at 8. Skysong argues that the plain and ordinary meaning of the term does not require the set of bits to be contiguous, and thus limiting the claim to contiguous bits would improperly narrow the claim. Dkt. No. 88 at 19-20.

Crowdstrike primary argument for limiting this term to contiguous bits is that a computation based on non-contiguous bits may lead to erroneous results—i.e., if the bits used in the first computations are not contiguous, the maximum value determined by the first computation may not represent the largest input. Dkt. No. 99 at 8. Crowdstrike’s argument is based on the presumption that the maximum value determined by the first computation must always identify the largest input. While the goal of the patent is to determine the largest input, the patent contemplates trading accuracy for efficiency and expressly discloses that the probability of the first computation identifying the largest input may be less than 100%. ’831 Patent, Abstract (“[a] maximum may be identified (e.g., by 90% probability)”). Because the patent contemplates trading accuracy for efficiency, the patent does not support Crowdstrike’s argument that the claim must be construed to avoid a result in which the maximum is not always identified. The plain language of the claims does not require the “set of most-significant bits” to be contiguous and the Court declines to import that limitation.

Last, the parties dispute whether it is necessary to include a limitation that the most significant bits in the first computation are less than “all the bits.” Skysong does not dispute that the most significant bits are less than all the bits, but argues the limitation is superfluous because the claims “distinguish MSB-based iterations [which include less than all the bits] from the later ‘full precision computation’ [which include all the bits].” Dkt. No. 88 at 19. While the claims inherently distinguish between computations on less than all the bits (the MSBs) and all the bits (full precision computations), expressly including this limitation does not change the scope of the claim and will aid the jury in understanding the scope of the claim.

For the above reasons, the Court construes this term as: “a first set of bits containing two or more high order bits, but less than all the bits, in a data set.”

**G. “second set of MSBs”**

Term	Skysong’s Proposed Construction	Crowdstrike’s Proposed Construction
“second set of MSBs”  '831 Patent, Claim 2	Plain and ordinary meaning	“second set of bits containing at least one more highest-order contiguous bit than the first set of most significant bits (MSBs) in a data set”

Final Construction: Plain and ordinary meaning.

Claim 2 of the '831 Patent recites “a second set of MSBs ..., the second set of MSBs being larger than the first set of MSBs.” Crowdstrike’s proposed construction adds two limitations to the claim term: 1) the second set of bits is at least one more bit than the first set of bits and 2) the bits are contiguous. The claim expressly recites that the second set of MSBs is larger than the first set of MSBs. Thus, construing this term to require “containing at least one more ... bit” is redundant and unnecessary.

Crowdstrike’s arguments related to “contiguous” are substantially the same as the previous term and the Court declines to read a “contiguous” limitation into this claim term for the same reasons.

Having resolved the parties’ disputes, the Court finds this term should maintain its plain and ordinary meaning.

**H. “performing a full precision computation of the value for a data set”**

Term	Skysong’s Proposed Construction	Crowdstrike’s Proposed Construction
“performing a full precision computation of the value for a data set”  '831 Patent, Claim 1  “performing . . . the full precision computation of	Plain and ordinary meaning	“performing a full convolution for a data set identified using the value calculated from a [first/second] set of most significant bits for a data set”

the value for a data set”		
’831 Patent, Claim 3		

Final Construction: Plain and ordinary meaning.

CrowdStrike’s proposed construction limits the claimed “full precision computation” to “a full convolution.” To support this modification to the claim language, Crowdstrike argues that the claims recite a “**convolutional** neural network” and thus a POSITA would understand “computation” to mean “convolution.” Dkt. No. 99 at 10. Crowdstrike also argues that the entire disclosure is related to convolution and the specification uses the terms “computation” and “convolution” interchangeably. *Id.*

As a preliminary matter, “full precision” in this claim term, refers to the number of bits involved in the computation, not the algorithm used for the computation. Thus, “full precision computation” refers to performing a computation on all the bits.

Crowdstrike urges the Court to limit “computation” to a specific type of computation—a convolutional computation. Crowdstrike argues that the claims recite a “**convolutional** neural network” and thus a POSITA would understand that “computation” must mean “convolution.” Dkt. No. 99 at 10. Crowdstrike’s argument presumes that convolutions are the only type of computations performed by convolutional neural networks, but Crowdstrike provides no basis for this presumption other than the term “convolutional neural networks” includes “convolutional.” While “convolutional neural networks” perform convolutional computations, Crowdstrike does not provide any basis to conclude that they do not also perform other operations. For example, the patent expressly discloses that convolutional neural networks perform both “convolution” and “pooling” operations. *See, e.g.*, ’831 Patent at 5:65-6:1; Figure 2. Without any basis to conclude that convolutional computations are the only type of

computations performed by convolutional neural networks, the Court declines to narrow the broad term “computation” to only one type of computation.

While the specification discloses performing convolutional computations, it repeatedly uses exemplary language, such as “may” or “e.g.” when discussing convolutions. *See, e.g.*, ’831 Patent at 5:17-36, 5:46-63; 8:2-7. The specification also interchangeably uses “convolutions” and “computations” in described embodiments involving convolutional computations. *See, e.g., id.* at 5:11-36. This usage, however, does not rise to the level of lexicographer or disclaimer, and Crowdstrike does not argue that it does. *See Thorner*, 669 F.3d at 1366 (holding that the standard for lexicography and disclaimer is “exacting”).

Claim 4, which depends from Claim 1, also cautions against reading convolution into Claim 1. Claim 4 recites “wherein the computing ... employs a convolution and a pooling.” This is not a strict application of claim differentiation because Crowdstrike’s proposed construction is limited to “convolution” rather than “convolution and pooling,” but it suggests the patentee did not intend to limit “computing” to only “convolution.” Crowdstrike argues Claim 4 is not relevant to the construction of this term, because it is directed to the first computation on the first set of MSBs rather than the computation on all the bits (the full precision computation) (Dkt. No. 99 at 11), but the impact of Claim 4 is that the patentee knew how to claim convolutional computations but chose not to in Claim 1.

Crowdstrike proposed construction also adds a limitation that the computation is performed on “a data set identified using the value calculated from a [first/second] set of most significant bits for a data set.” Skysong responds that this limitation is unnecessary and redundant because the claim language expressly requires performing the computation on the first/second set of most significant bits. Dkt. No. 88 at 24. The Court agrees with Skysong.

Claim 1 expressly requires performing the computation on the data set that exhibited the maximum value based on a computation of the first set of most significant bits and Claim 3 requires performing the computation on the data set that exhibited the maximum value based on a computation of the second set of most significant bits. Because the claim language expressly and clearly includes those limitations, there is no reason to repeat those limitations in the construction of this claim term.

Absent lexicography or disclaimer, there is no basis to narrow the broad plain and ordinary meaning of “computation” to “convolution,” and the Court declines to include redundant limitations into this claim term. Having resolved the parties’ dispute, the Court finds this term retains its plain and ordinary meaning.

**I. “social connections”**

Term	Skysong’s Proposed Construction	Crowdstrike’s Proposed Construction
“social connections” ’897 Patent, Claim 1	Plain and ordinary meaning, where plain and ordinary meaning means connections of a user to other users in a graph representing a social network  Alternatively: Plain and ordinary meaning, where plain and ordinary meaning means connections of a user to other users in a social network	Plain and ordinary meaning

Final Construction: Plain and ordinary meaning.

Claim 1 recites: “accessing features from the plurality of datasets that include measures computed from **social connections** of users posting hacking-related content.” (Emphasis added).

Skysong seeks to narrow the meaning of “social connections” in two ways. First, Skysong seeks to limit “social connections” to “a social network.” The specification makes clear

that the two terms are different and a social network can be computed from social connections. *See* '897 Patent at 11:29-32. Furthermore, interjecting “network” into the construction would potentially create confusion. For example, “a social connection” may include sending messages via text, while “a social network” may be interpreted as Internet-based social networks, such as Facebook, and thus exclude some “social connections.”

Second, Skysong’s construction requires a “graph representing a social network.” To support adding this limitation, Skysong argues that “the specification repeatedly and exclusively frames ‘social connections’ as edges among users in a social graph ... .” Dkt. No. 88 at 26. The references to a “social graph” in the specification, however, fall far short of the exacting standard required to establish lexicography or disclaimer. *See Thorner*, 669 F.3d at 1366 (holding that the standard for lexicography and disclaimer is “exacting”).

For the above reasons, the Court rejects Skysong’s proposed construction and the term maintains its plain and ordinary meaning.

**J. “before disclosure”**

Term	Skysong’s Proposed Construction	Crowdstrike’s Proposed Construction
“before disclosure”  '897 Patent, Claims 1, 14 and 18	Plain and ordinary meaning	“prior to availability on a public data source”

Final Construction: “prior to disclosure to a public database”

Crowdstrike argues this term requires construction because the claim language does not identify the reference by which “before” is determined. Dkt. No. 80 at 22. Skysong agrees that the context of the patent requires the disclosure to occur “before public disclosure,” but Skysong argues the public disclosure could be to a non-public resource. Dkt. No. 88 at 27-29. The Court agrees that in the context of the patent, “before disclosure” means before public disclosure. *See*,

*e.g.*, '897 Patent at 11:43-45. The Court, however, disagrees that disclosure to a non-public resource, such as a non-public database, is a public disclosure.

The prosecution history also supports that “before disclosure” requires the disclosure to be to a public data source. During prosecution, the patentee amended the claims to add the limitation “disclosure to a public vulnerability database,” and distinguished prior art based on that limitation. Dkt. No. 80-9 at 8, 10. Subsequently, the patentee amended the claims to delete the “disclosure to a public vulnerability database” limitation and add the limitation in dispute, which requires predicting the likelihood of exploitation of software vulnerabilities “before disclosure.” Dkt. No. 88-15 at 3. As part of the amendment, the patentee distinguished a prior art reference by arguing the reference “does not discuss predicting a likelihood of exploitation of a vulnerability discussed online *prior to disclosure to a public database* or prior to actual exploitation of the vulnerability, i.e., [the reference] does not disclose the features of “wherein the likelihood of exploitation predicts an actual exploitation of the respective software vulnerabilities *before disclosure* ... .” *Id.* at 11. The Court finds that Skysong relies on “disclosure to a public database” to distinguish the prior art and thus Skysong disclaimed a construction that is not limited to “prior to disclosure to a public database.”

Skysong argues that the disclaimer should also include “or prior to actual exploitation of the vulnerability.” Dkt. No. 104 at 15 (referencing Dkt. No. 88-15 at 11). The Court disagrees for several reasons. First, inserting “prior to actual exploitation of the vulnerabilities” into the claim language does not make sense. The claim recites “wherein the likelihood of exploitation predicts an actual exploitation ... before disclosure.” Substituting “prior to actual exploitation of the vulnerability” for “before disclosure” would result in the claim reciting “wherein the likelihood of exploitation predicts an actual exploitation ... prior to actual exploitation of the

vulnerability,” which divorces the claim language from the meaning of “before disclosure.” Second, the claim term would not have any objective boundary because there is no way to determine whether there was actual exploitation somewhere in the world if it was not publicly disclosed.

Skysong also argues that Claim 12’s reference to a “public vulnerability database” confirms that Claim 1 intentionally uses “before disclosure” without “public” limitation. Dkt. No. 88 at 28. The reference to “public vulnerability database” in Claim 12, however, relates to an input to the classification model in Claim 1 rather than the prediction of an actual exploitation before disclosure.

For the above reasons, the Court construes “before disclosure” as “prior to disclosure to a public database.”

### III. CONCLUSION

Based on the foregoing analysis, the Court adopts the following final claim constructions:

Term	Court’s Final Construction
<p><b>“a set of vulnerabilities”</b>                      ’385 Patent, Claims 1, 8, 15</p>	<p>Plain and ordinary meaning</p>
<p><b>“analyzing the application of the set of exploits on the computer system to detect a particular vulnerability of the computer system”</b>                      ’385 Patent, Claims 1, 15</p> <p><b>“analyzing an application associated with the set of exploits on the computer system to detect a particular vulnerability of the constraint set of vulnerabilities of the computer system”</b></p>	<p>Plain and ordinary meaning.</p>

'385 Patent, Claim 8	
<p><b>“sensitive information presenting a security risk”</b></p> <p>'721 Patent, Claim 1</p> <p><b>“sensitive information”</b></p> <p>'721 Patent, Claim 16</p>	<p>Not Indefinite. Plain and ordinary meaning.</p>
<p><b>“Browser” / “Browser Instance”</b></p> <p>'721 Patent, Claims 1, 7, 12</p>	<p>“a web browser” / “an instance of a web browser”</p>
<p><b>“machine classifier”</b></p> <p>'900 Patent, Claims 1, 12</p>	<p>Plain and ordinary meaning.</p>
<p><b>“first set of most significant bits (MSBs)”</b></p> <p>'831 Patent, Claim 1</p>	<p>“a first set of bits containing two or more high order bits, but less than all the bits, in a data set”</p>
<p><b>“second set of MSBs”</b></p> <p>'831 Patent, Claim 2</p>	<p>Plain and ordinary meaning.</p>
<p><b>“performing a full precision computation of the value for a data set”</b></p> <p>'831 Patent, Claim 1</p> <p><b>“performing . . . the full precision computation of the value for a data set”</b></p> <p>'831 Patent, Claim 3</p>	<p>Plain and ordinary meaning.</p>
<p><b>“social connections”</b> '897 Patent, Claim 1</p>	<p>Plain and ordinary meaning.</p>
<p><b>“before disclosure”</b></p> <p>'897 Patent, Claims 1, 14, 18</p>	<p>“prior to disclosure to a public database”</p>

SIGNED this 29th day of May, 2026.

A handwritten signature in black ink, appearing to read "Derek T. Gilliland", written over a horizontal line.

DEREK T. GILLILAND  
UNITED STATES MAGISTRATE JUDGE