

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TRUSTED KNIGHT CORPORATION,)
)
Plaintiff,)
)
v.) C.A. No. 14-1063-LPS-CJB
)
INTERNATIONAL BUSINESS MACHINES)
CORPORATION and)
TRUSTEER, INC.,)
)
Defendants.)

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MEMORANDUM OPINION

November 19, 2015
Wilmington, Delaware


STARK, U.S. District Judge:

Pending before the Court is the issue of claim construction for four disputed terms in U.S. Patent No. 8,316,445 (“the ’445 patent”), appearing in independent claims 1, 22, and 23.¹

I. BACKGROUND

Plaintiff Trusted Knight Corporation (“Trusted Knight” or “Plaintiff”) filed this patent infringement suit against Defendants International Business Machines Corporation and Trusteer, Inc. (“Defendants”) on August 18, 2014, alleging infringement of the ’445 patent. (D.I. 1)

The ’445 patent, entitled “System and Method for Protecting Against Malware Utilizing Key Loggers,” issued on November 20, 2012. (’445 patent Abstract) The ’445 patent generally relates to preventing unauthorized individuals from capturing, logging, and transmitting keystrokes from an infected computer. (’445 patent at 1:24-30) A goal of the invention is to “prevent[] key logger malware that utilizes form grabbing techniques to steal financial and identity information from users’ browsers.” (*Id.*)

The parties completed claim construction briefing on August 28, 2015. (D.I. 58, 59, 71, 72) The Court held a claim construction hearing on September 21, 2015. (D.I. 80) (“Tr.”)

II. LEGAL STANDARDS

Claim construction is a question of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837 (2015) (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 388-91 (1996)). “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) (internal quotation marks omitted). “[T]here is no magic formula or catechism

¹The ’445 patent can be found in the record at D.I. 1 Ex. A.

for conducting claim construction.” *Id.* at 1324. Instead, the court is free to attach appropriate weight to sources “in light of the statutes and policies that inform patent law.” *Id.*

“[T]he words of a claim are generally given their ordinary and customary meaning [This is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1312-13 (internal citations and quotation marks omitted). “[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted). The patent specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.” *Vitronics Corp. v. Conception, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

While “the claims themselves provide substantial guidance as to the meaning of particular claim terms,” the context of the surrounding words of the claim also must be considered. *Phillips*, 415 F.3d at 1314. Furthermore, “[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment . . . [b]ecause claim terms are normally used consistently throughout the patent” *Id.* (internal citation omitted).

It is likewise true that “[d]ifferences among claims can also be a useful guide 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 (internal citation omitted).

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.” *Id.* at 1316.

It bears emphasis that “[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intent to limit the claim scope using words or expressions of manifest exclusion or restriction.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (internal quotation marks omitted).

In addition to the specification, a court “should also consider the patent’s prosecution history, if it is in evidence.” *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996). The prosecution history, which is “intrinsic evidence,” “consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent.” *Phillips*, 415 F.3d at 1317. “[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” *Id.*

In some cases, “the district 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. For instance, expert testimony can be useful “to ensure that the court’s understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the

pertinent field.” *Id.* Nonetheless, courts must not lose sight of the fact that “expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence.” *Id.* Overall, while extrinsic evidence “may be useful” to the court, it is “less reliable” than intrinsic evidence, and its consideration “is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Id.* at 1318-19. Where the intrinsic record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper. *See Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1308 (Fed. Cir. 1999) (citing *Vitronics*, 90 F.3d at 1583).

Finally, “[t]he 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.” *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that “a claim interpretation that would exclude the inventor’s device is rarely the correct interpretation.” *Osram GmbH v. Int’l Trade Comm’n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (quoting *Modine Mfg. Co. v. United States Int’l Trade Comm’n*, 75 F.3d 1545, 1550 (Fed. Cir. 1996)).

III. DISPUTED TERMS²

A. “clearing confidential data” (claims 1 and 23)

Trusted Knight’s Proposal	No construction necessary. If construed, the term means “removing the meaning from confidential data”
Defendants’ Proposal	“Deleting the contents of confidential form inputs”
Court’s Construction	“removing the meaning from confidential data”

Defendants argue that term “clearing confidential data” should be construed as “deleting the contents of confidential form inputs” and, therefore, that the term does not encompass encryption. Plaintiff takes the view that no construction is necessary but, if the term is construed, it more broadly covers “removing the meaning from confidential data.”³ In essence, the parties have two disputes. First, does “clearing” encompass encryption? Second, is “confidential data” limited to form inputs?

Defendants first contend that the intrinsic evidence establishes that “clearing confidential data” does not encompass encryption. Emphasizing the presumption that “two different terms have different meanings” (D.I. 59 at 9 (citing *Comaper Corp. v. Antec, Inc.*, 596 F.3d 1343, 1348 (Fed. Cir. 2010))), Defendants point out that the patent uses both “clear” and “encrypt,” showing that the two terms do not mean the same thing (*see id.* at 9 n.2; *see also* Tr. at 29). The flaw in

²The parties agreed to the construction of four terms, which the Court will adopt. (*See* D.I. 68-1)

³For each of the disputes, Plaintiff’s principal position is that no construction is necessary. For each of the disputes, for reasons that should be clear from the discussion to follow, the Court disagrees. *See O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co. Ltd.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008) (“When the parties present a fundamental dispute regarding the scope of a claim term, it is the court’s duty to resolve it.”).

Defendants' logic is that two terms may have different, but not mutually exclusive, meanings. For example, "exercise" and "jog" have different meanings, yet the two activities overlap – jogging is a *type* of exercise. Similarly, the observation that "clear" and "encrypt" have different meanings does not speak to whether encryption could be a *type* of clearing.

Defendants have identified no disclaimer of encryption from the plain and ordinary meaning of "clearing." Hence, while the Court does not at this time conclude that clearing *necessarily* encompasses encryption (a point on which Plaintiff represents the record will become more clear as the case proceeds (*see* Tr. at 15)), the Court does conclude that encryption is not necessarily outside the scope of what the patent means by "clearing."

Second, the Court agrees with Plaintiff that the invention of the '445 patent can be used to protect any confidential data. There is no intrinsic evidence to support Defendants' contention that the patent only protects "confidential form data." To the contrary, claim 22 claims an invention protecting "data inputs keyed in by a user at the zero-ring level" and "decrypt[s] data which passed via the 3-ring level." ('445 patent at 13:1-11) These references to "data" outside the context of form fields indicate that the claims' use of the term "data" covers more than just form fields.

Accordingly, the Court will adopt Plaintiff's proposed construction.

B. “prevents any other hooks from inserting at the 0-Ring level” (claim 22)

Trusted Knight’s Proposal	No construction necessary. If construed, the term means “prevents other software from occupying the most privileged access level”
Defendants’ Proposal	“continuously monitoring and negotiating the placement of the initial hook so that no other hooks insert at a more privileged access level”
Court’s Construction	“prevents other software from occupying the most privileged access level”

The parties’ disagreement is whether the claimed invention must “continuously monitor” its placement in the stack. Defendants’ proposal that the claims mandate the invention “continuously monitor[] and negotiat[e]” its placement in a computer system is improperly limiting. For their proposed construction, Defendants point to the portion of the specification which states, “[t]he software in accordance with the present invention is placement aware and renegotiates its location in the API stack to ensure there are no other hooks that circumvent the protection at any time” (‘445 patent at 7:47-50), and further states that “[b]y continuously refreshing and monitoring this state we can thereby protect and identify any hook attempts from ring 3 and on protecting the 0 ring level” (*id.* at 8:47-51).⁴ There is no clear indication from

⁴The sentence from which Defendants draw this phrase reads in its entirety: “The invention protects itself at the 0-ring level by creating a wrapper evoking SetWindowsHookEx(WH_KEY-BOARD_LL, KeyboardProc, hInst, 0) thereby initiating and maintaining the low global level system hook in the API stack.” (‘445 patent at 8:43-47) The reference to “SetWindowsHookEx” is a function call unique to Windows operating systems, yet Defendants acknowledge (as does the specification) that “[t]he invention can be applied to other OS’s [i.e., non-Windows operating systems].” (‘445 patent at 10:27-29; *see also* Tr. at 48) It follows, then, that this sentence in the specification was not intended to disclaim, or to define in any exclusionary manner, features that must necessarily be in all claimed embodiments of the invention.

these statements (or any other portion of the specification) that the patentee intended to limit the scope of the patent to embodiments that “continuously monitor and negotiate.” *See Liebel-Flarsheim*, 358 F.3d at 906.

Accordingly, the Court will adopt Plaintiff’s proposed construction, which is supported by the intrinsic evidence.

C. “In response to the software key logging through the API stack to an internet communication port” (claims 1 and 23)

Trusted Knight’s Proposal	No construction necessary. If construed, the term means “as protection against key logging malware that operates by modifying the interfaces for process and library functions to an internet communication port”
Defendants’ Proposal	Indefinite
Court’s Construction	Indefinite

The parties dispute whether the term “in response to software key logging through the API stack to an internet communication port” is indefinite. Indefiniteness is a question of law. *See Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1378 (Fed. Cir. 1999). The facts underlying an indefiniteness determination must be proved by clear and convincing evidence. *See Young v. Lumenis, Inc.*, 492 F.3d 1336, 1347 (Fed. Cir. 2007); 35 U.S.C. § 282; *see also Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2130 n.10 (2014).

Defendants argue that the claim term is indefinite because it is unclear *what* action is performed “in response to the software key logging.” (*See* D.I. 59 at 16-17) The Court agrees.

During oral argument, Plaintiff unequivocally stated that the invention does not respond to – and does not even detect – malware. (Tr. 55) (“It is in response to the fact that malware is out there, is ever present. But there doesn’t have to be a specific malware attack.”) This

acknowledgment is supported by the patent specification, which states that “[t]he solution of the present invention does not depend on detection of malware at all.” (‘445 patent at 3:59-61) But if the invention is not responding to malware, then what *is* happening “[i]n response to the software key logging?”

Plaintiff answers that the claimed invention is responding to the *threat* of malware. This position is undermined by the claim language, as the term “in response to the software key logging through the API stack” suggests an event (“response”) triggered by another event (“logging”). Moreover, the use of the definite article “the” in the term “in response to *the* software key logging” suggests an event (“response”) triggered by a specific instance (“*the* . . . logging”). See generally *Freytag v. Comm’r*, 501 U.S. 868, 902 (1991) (describing definite article “the” as narrowing class to specific “envisioned” members of class); *Warner-Lambert Co. v. Apotex Corp.*, 316 F.3d 1348, 1356 (Fed. Cir. 2003) (noting that “the” refers to specific thing rather than one that is general or undefined); *Am. Bus Ass’n v. Slater*, 231 F.3d 1, 4–5 (D.C. Cir. 2000) (“[I]t is a rule of law well established that the definite article ‘the’ particularizes the subject which it precedes. It is a word of limitation as opposed to the indefinite or generalizing force of ‘a’ or ‘an.’”) (internal quotation marks omitted).

Additionally, adoption of Plaintiff’s proposal would appear to leave the disputed term as mere surplusage, essentially a non-limiting preamble (for some reason embedded in the body of the claim) vaguely describing the purpose of the invention. Such a construction is generally to be avoided. See generally *Texas Instruments Inc. v. United States Int’l Trade Comm’n*, 988 F.2d 1165, 1171 (Fed. Cir. 1993).

Given the Court’s conclusions above, Plaintiff’s extrinsic evidence – the expert

declaration of Dr. Scott M. Nettles, a computer scientist (*see* D.I. 73) – does not change the outcome. Dr. Nettles opines that the patent claims, when read in light of the specification, teaches one of ordinary skill in the art “that the invention’s protections are provided in response to form-grabbing and hook-based key loggers. The submission and clearing is in response to, or as protection against, form-grabbing malware.” (D.I. 73 ¶ 37) Even accepting that “a person of ordinary skill in the art would easily understand [this to be] the scope of the claim” (*id.*), that fact does nothing to alter the ambiguities and surplusage concerns noted in the Court’s analysis above. Ultimately, the conclusory extrinsic opinion of the expert does not overcome the lack of sufficient definitiveness in the claim language itself.⁵

⁵Plaintiff contended at the hearing that Dr. Nettles’ opinions on this point was “essentially un rebutted.” (Tr. at 57) The Court disagrees. Defendant’s expert, Dr. Scott Nielson, also a computer scientist, opined that Plaintiff’s claim construction position (which is the same position advocated in the Nettles Declaration) “eliminates the claimed concept of a ‘response’ from the claims at all, instead replacing it with ‘as protection against.’” (D.I. 60 ¶ 77) Dr. Nielson elaborated:

The anti key logging software described in the ’445 patent does not “submit . . . in response to [] software key logging.” Rather, submission of data through an internet communications port occurs irrespective of whether a key logger is present or not. The alleged invention described in the ’445 patent does not prevent submission. Instead, the entire point of the invention is to *allow* submission even if a key logger is present. Therefore, in my opinion, submission does not occur in response to software key logging. At the same time, it also cannot be “clearing” that is “in response to the software key logging” because the claim dictates that it must be “to an internet communication port.” A person of ordinary skill in the art would understand that clearing cannot be “to an internet communication port.” Thus, in my opinion, the scope and boundaries of the claims are not reasonably clear.

(*Id.* ¶ 76)

Accordingly, the Court is persuaded that a person of ordinary skill in the art⁶ would not know the meaning of this claim term with reasonable certainty, so it is indefinite.

D. “a process of passing the encrypted data to a 3-ring level where a hook inserted by a hook-based key logger” (claim 22)

Trusted Knight’s Proposal	No construction necessary. If construed, the term means “a process of passing the encrypted data to an unprivileged access level where hook-based key loggers operate”
Defendants’ Proposal	Indefinite
Court’s Construction	Indefinite

Plaintiff concedes that this term contains an error; it is missing a verb. (*See* Tr. at 63) In Plaintiff’s view, while the claim literally reads “a process of passing the encrypted data to a 3-ring level where a hook inserted by a hook-based key logger,” it was intended by the patentee to read “a process of passing the encrypted data to a 3-ring level where a hook *is* inserted by a hook-based key logger” (emphasis added). Plaintiff further contends that even if the error is not corrected, a person of ordinary skill in the art would understand its meaning.

“It is well-settled law that, in a patent infringement suit, a district court may correct an obvious error in a patent claim.” *CBT Flint Partners, LLC v. Return Path, Inc.*, 654 F.3d 1353, 1358 (Fed. Cir. 2011). However, a district court may correct a patent only if “(1) the correction is not subject to reasonable debate based on consideration of the claim language and the specification and (2) the prosecution history does not suggest a different interpretation of the

⁶While the parties disagree about the education level and qualifications of a person having ordinary skill in the art, they agree that resolution of that issue does not impact any of their claim construction disputes. (*See* Tr. at 32, 60)

claims.” *Novo Industries, L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1354 (Fed. Cir. 2003).

Plaintiff’s proposed correction fails at the first step of this test, as it is subject to reasonable debate. Making Plaintiff’s requested correction – so that the claim term would cover “a process of passing the encrypted data to a 3-ring level where a hook *is* inserted by a hook-based key logger” – would appear to make this limitation operative only *in response to* a hook (i.e., a form of malware) being inserted. Yet the specification – and, as noted in connection with the preceding term dispute, Plaintiff as well – states that the claimed invention operates even in the absence of malware (i.e., without a hook being inserted by a hook-based key logger). (*See* ’445 patent at 3:59-61; Tr. at 55) This seeming contradiction – and, at minimum, ambiguity – demonstrate that Plaintiff’s proposed correction to the claim language is subject to reasonable debate.

Furthermore, other possible corrections would appear to be feasible. For example, the Court could “correct” the term “where a hook inserted by” with “where a hook *could be* inserted by.” This “correction” would have different implications for claim scope than does Plaintiff’s proposed correction of adding “is.” Among other things, “could be” would seem to be consistent with the specification’s and Plaintiff’s position that the claimed invention can operate even in the absence of malware (as long as it also can operate in response to a specific malware attack).

Because the proposed correction is subject to reasonable debate, and that debate would impact the scope and meaning of the disputed term, the Court cannot correct the disputed claim term. *See Return Path, Inc.*, 654 F.3d at 1358-59 (stating existence of several possible corrections should not prevent district court from correcting error when “a person of skill in the art would find the claim to have the same scope and meaning under each of the . . . possible

meanings”).

The same reasoning persuades the Court not to adopt Plaintiff’s proposed alternative construction. Plaintiff’s proposal is not supported by the text of the claim itself.

Accordingly, the Court is persuaded that a person of ordinary skill in the art would not know the meaning of this claim term with reasonable certainty, so it is indefinite.

VI. CONCLUSION

An appropriate Order follows.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TRUSTED KNIGHT CORPORATION,)	
)	
Plaintiff,)	
)	
v.)	C.A. No. 14-1063-LPS-CJB
)	
INTERNATIONAL BUSINESS MACHINES)	
CORPORATION and)	
TRUSTEER, INC.,)	
)	
Defendants.)	

ORDER

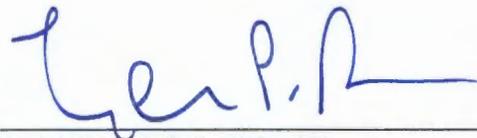
At Wilmington this 19th day of November, 2015:

For the reasons set forth in the Memorandum Opinion issued this date, IT IS HEREBY ORDERED that the disputed claim language of U.S. Patent No. 8,316,445 (“the ‘445 patent”) shall be construed as follows:

Term	Court’s Construction
clearing confidential data	“removing the meaning from confidential data”
prevents any other hooks from inserting at the 0-Ring level	“prevents other software from occupying the most privileged access level”
In response to the software key logging through the API stack to an internet communication port	Indefinite
a process of passing the encrypted data to a 3-ring level where a hook inserted by a hook-based key logger	Indefinite

IT IS FURTHER ORDERED that the parties’ agreed-upon constructions (D.I. 68-1) are adopted as follows:

Term	Court's Construction
zero-ring level/0-Ring level	"most privileged access level"
an application programming interface ("API") stack of a browser	"API stack accessed by a browser including the operating system's API"
designated entity	"intended receiving entity over a network"
global hook	"a hook accessibly by any process and thread"



HON. LEONARD P. STARK
UNITED STATES DISTRICT JUDGE