IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MOXCHANGE LLC,	:	
Plaintiff,	:	
v.	:	C.A. No. 20-1123-LPS
ALE USA INC.,	:	
Defendant.	:	

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MEMORANDUM OPINION

August 4, 2021
Wilmington, Delaware

STARK, U.S. District Judge:

On August 26, 2020, Moxchange LLC ("Plaintiff" or "Moxchange") brought suit against ALE USA Inc. ("Defendant" or "ALE") for infringement of U.S. Patent Nos. 7,860,254 (the "'254 patent"), 7,233,664 (the "'664 patent"), and 7,376,232 (the "'232 patent"). (D.I. 1) The patents-in-suit generally relate to cryptography and computer system security. (*See id.* ¶¶ 12, 31, 49) In response, Defendant moved to dismiss Plaintiff's complaint pursuant to Federal Rule of Civil Procedure 12(b)(6) for seeking to claim patent-ineligible subject matter under 35 U.S.C. § 101. (D.I. 8) On March 12, 2021, the Court heard argument on Defendant's motion to dismiss and determined that claim construction was necessary before it could resolve the § 101 issue. (*See* D.I. 23 at 140-43)

Thereafter, the Court ordered an expedited claim construction proceeding limited to the claim terms related to the Section 101 dispute. (D.I. 27) Following the issuance of that order, Plaintiff filed an amended complaint asserting only the '664 patent. (D.I. 33) The parties then submitted a joint claim construction brief and exhibits. (*See* D.I. 42) The Court held a claim construction hearing on July 1, 2021, at which both sides presented oral argument. (D.I. 48) ("Tr.")[1]

I. LEGAL STANDARDS

The ultimate question of the proper construction of a patent is a question of law. *See Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318, 321 (2015) (citing *Markman v. Westview*

[1] The hearing was conducted remotely, using videoconference technology. The undersigned Judge has had success with remote claim construction proceedings during the pandemic. On this occasion, however, the court reporter (who was attending remotely) lost her connection for a brief time near the end of the hearing, resulting in a lapse in transcription. (*See* Tr. at 64-65) The Court and the parties did not initially realize this had occurred. After learning what had happened, and to ensure a complete record, all involved in the hearing reconvened to re-articulate the portion of the discussion that had not been transcribed. (*See id.* at 64-68)

Instruments, Inc. ("*Markman II*"), 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) (en banc) (internal quotation marks omitted). "[T]here is no magic formula or catechism for conducting claim construction." *Id.* at 1324. The Court is free to attach the appropriate weight to appropriate 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," which is "the meaning that the term would have to a person of ordinary skill in the art [("POSA")] 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 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. Conceptronic, 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" because "claim terms are normally used consistently throughout the patent." *Id.*

It is likewise true that "[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. This presumption of claim differentiation is "especially strong when the limitation in dispute

is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim." *SunRace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003).

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. 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 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).

In addition to the specification, a court should "consider the patent's prosecution history, if it is in evidence." *Markman v. Westview Instruments, Inc.* ("*Markman I*"), 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). The prosecution history, which is "intrinsic evidence," "consists of the complete record of the proceedings before the [U.S. 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.*

Sometimes, "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*, 574 U.S. at 331. "Extrinsic evidence consists of all evidence external to the patent and prosecution history,

including expert and inventor testimony, dictionaries, and learned treatises." *Markman I*, 52 F.3d at 980. For instance, technical dictionaries can assist the court in determining the ordinary and customary meaning of a term because such dictionaries "endeavor to collect the accepted meanings of terms used in various fields of science and technology." *Phillips*, 415 F.3d at 1318. In addition, 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 SpA*, 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) (internal quotation marks omitted).

II. CONSTRUCTION OF DISPUTED TERM

A. "synchronously regenerating"[2]

Moxchange regenerating: "performing automated continuous key modification [of]" synchronously regenerating: "automatically and separately regenerating to obtain the same result"
ALE regenerating: No construction necessary. Alternatively, "forming or creating again." synchronously regenerating: "regenerating in a manner that ensures the same"
Court synchronously regenerating: "automatically and separately performing automated continuous key modification [of] to obtain the same result"

The parties briefed "regenerating" and "synchronously regenerating" as two separate terms. (*See generally* D.I. 42) Plaintiff contends that the Court should construe each term separately (*see* Tr. at 63-64) but the Court agrees with Defendant that it is more appropriate and less confusing to construe them together as the single claim term they are (*see id.* at 35). However characterized, the parties have three disputes: (i) whether regenerating must be "automated," (ii) whether regenerating must be "continuous," and (iii) as to the meaning of "synchronous." The Court sides with Plaintiff on all three disputes.

First, while ALE correctly observes that it is not entirely clear from the briefing what meaning Moxchange ascribes to the "automated" and "automatically" limitations (*see* D.I. 42 at 24), at the hearing Moxchange clarified its view that these limitations mean "done by a computer . . . without human intervention" (Tr. at 61-62). Defendant agreed to this definition. (*Id.* at 65-66) The Court does as well. Further, the use of both "automatically" and "automated" in the Court's construction is not redundant. Rather, it conveys that the two distinct processes of

[2] This term appears in claims 1-25 of the '664 patent.

synchronization and regeneration are both automated – that is, they are both done by a computer without human intervention. (*See id.* at 30-31)

The specification provides substantial support for Moxchange's contention that the claimed "regenerating" must be automated. (*See id.* at 6-7, 11-14; *see also* D.I. 42 at 5-7) According to the specification, a "primary advantage of the present invention is that it is fully automated, with all system nodes synchronized and mutually authenticated, to ensure security." ('664 patent at 8:35-37) The specification teaches examples of automated regeneration, including the use of daemons (automated background programs) to regenerate new authentication keys. (*See id.* at 5:24-31; *see also id.* at 6:51-7:8 (describing nodes using authentication keys); *id.* at dep. cls. 10-13, 22-23 (requiring automated actions such as buffering)) Additionally, the specification's description of the prior art – and the problems purportedly overcome by the patent – would suggest to a POSA that the claims require automated regeneration. (*See, e.g.*, *id.* at 2:42-53) ("By obtaining the key at any time of a secure session, an intruder can decipher the entire exchanged data set, past and future.") One of the primary aims of the invention was to eliminate security vulnerabilities, such as the ability of a human "super user" with insider privileges to gain access to an authentication key. (*See id.* at 2:1-6) If the claim could be practiced manually by a human, the security risk intended to be eliminated by the patent would be reintroduced. (*See* Tr. at 13-14; D.I. 42 at 5)

Second, as Moxchange persuasively argues, the regeneration must be "continuous" to overcome the shortcomings in the prior art of the "static key." (*See* Tr. at 14-15; D.I. 42 at 14) As the patent explains, a problem in the prior art was the "use of only one static encryption key . . . [which] makes it easier for an intruder to have an ample amount of time to break the key." ('664 patent at 1:60-66) The specification adds that "[a] primary object of the present invention

is to provide a dynamic encryption method and system having no static keys . . . that are susceptible to a security breach." (*Id.* at 8:21-24; *see also id.* at 8:46-48 ("[An] advantage of the invention is that an initial [dynamic authentication key] is securely exchanged between a user and [central authority] which is continuously regenerated during the entire life of the user."))

ALE insists that the claimed regeneration need not be "continuous" and instead encompasses "both the synchronous regeneration of [just] a single authentication key and the synchronous regeneration of multiple authentication keys." (D.I. 42 at 30) In support of its contention, ALE points to the claim language, "synchronously regenerating ***an*** authentication key" (emphasis added), observing that "a" or "an" in a comprising claim typically connotes "one or more." (*Id.* at 22) (citing *Celgene Corp. v. Peter*, 931 F.3d 1342, 1350 (Fed. Cir. 2019)) The Court disagrees. Here, the patent as a whole makes clear that synchronously regenerating is a constant, continuing process. As Moxchange explained, "[r]egenerating a new key only once would result in having a single static key," reviving the security vulnerabilities the patent aimed to fix. (*Id.* at 8; *see also* Tr. at 14-15) A POSA would understand that one or more authentication keys must be generated with ***each*** iteration of the regeneration.[3]

Contrary to another of ALE's arguments, the patent's reference to regeneration occurring "periodically or ***a periodically***" ('664 patent at 12:61-64) (emphasis added) does not mean it may be non-continuous; instead, as Moxchange explains, it indicates to a POSA that regeneration may be based on factors other than time, like the exchange of data records (*see* D.I. 42 at 14; Tr. at 60-61).

[3] Moxchange notes that the specification uses the word "generation" to describe the act of creating a static key in the prior art and "***re***generation" to describe the ongoing process of the claims. (*See* D.I. 42 at 14-15) (emphasis added)

The prosecution history of the parent '254 patent does not alter the Court's conclusion. During prosecution, the applicant amended the language of pending claim 18 from "regenerating" to "continuously regenerating." (*See* D.I. 42 at 11) (citing D.I. 42 Ex. 6 at 5) As the parties agree, the record is silent as to the reason for this amendment. (Tr. at 31-32, 39) Moreover, the amendment did not just add "continuously." Instead, it replaced the former claim language of "regenerating . . . ***every Δt***" – that is, regenerating during every certain time period – with "continuously regenerating," which a POSA might understand to be merely a clarification. (D.I. 42 Ex. 6 at 5 (emphasis added); *see* Tr. at 58-59)[4] ALE acknowledges there is no clear and unmistakable disclaimer. (*See, e.g.*, Tr. at 39)

Third, as to the meaning of "synchronously," the parties agree that "synchronous" regeneration encompasses a process that yields the same result (here, an authentication key). (*See* D.I. 42 at 20, 27) As Moxchange states, "synchronously" requires separate processes, such as alignment in the count of authentication keys between two separate nodes. (*See id.* at 21) (citing '664 patent at 5:51-61, 20:54-65) The separation of these processes is central to the invention's capacity to protect against "synchronization disturbance," in which an intruder imitates a registered user or freezes a number-regeneration counter; a secure connection cannot be formed without alignment and authentication. (*Id.* at 22; '664 patent at 14:21-25)[5]

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[4] Nor does the Court find that certain proceedings before the Patent Trial and Appeal Board ("PTAB") warrant eliminating "continuous" from its construction. (*See, e.g.*, D.I. 42 at 12) (ALE arguing that cancellation of claims 18 and 34 supports its construction) During prosecution of the '254 patent appeal, neither the patentee nor the PTAB expressly distinguished between "regenerating" and "continuously regenerating" but, rather, appeared to use the terms interchangeably. (*See* D.I. 42 Ex. 7 at 9-11; *see also* D.I. 42 at 15-16)

[5] As described in the specification, synchronization is performed at the nodes. (*See* '664 patent at 20:54-58) Thus, synchronization occurs automatically; that is, without human intervention.

III. CONCLUSION

The Court will construe the disputed term as explained above. An appropriate Order follows.

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v.	:	C.A. No. 20-1123-LPS
ALE USA INC.,	:	
Defendant.	:	

ORDER

At Wilmington this **4th** day of **August, 2021**:

For the reasons set forth in the Memorandum Opinion issued this date,

IT IS HEREBY ORDERED that the following claim term is construed as follows:

Claim Term	Court's Construction
synchronously regenerating	"automatically and separately performing automated continuous key modification [of] to obtain the same result"

UNITED STATES DISTRICT JUDGE