

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Richmond Division**

**THE TRUSTEES OF COLUMBIA
UNIVERSITY IN THE CITY OF
NEW YORK,**

Plaintiff,

v.

Civil Action No. 3:13cv808

SYMANTEC CORPORATION,

Defendant.

MEMORANDUM OPINION

This matter comes before the Court on Defendant Symantec Corporation's ("Symantec") Motion for Judgment on the Pleadings pursuant to Federal Rule of Civil Procedure 12(c)¹ and 35 U.S.C. § 101² (the "Motion for Judgment"). (ECF No. 245.) Plaintiff the Trustees of Columbia University in the City of New York ("Columbia") responded. (ECF No. 264.) Symantec replied, (ECF No. 267), and Columbia, with the Court's leave, filed a sur-reply, (ECF No. 279). The matter is ripe for disposition. The Court dispenses with oral argument because the materials before it adequately present the facts and legal contentions, and argument would not aid the

¹ Federal Rule of Civil Procedure 12(c) provides: "After the pleadings are closed—but early enough not to delay trial—a party may move for judgment on the pleadings." Fed. R. Civ. P. 12(c).

² Section 101 states: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101.

decisional process.³ The Court exercises jurisdiction pursuant to 28 U.S.C. § 1331.⁴ For the reasons that follow, the Court will deny the Motion for Judgment.

I. Procedural and Factual Background

Columbia began this patent infringement and related claims litigation⁵ against Symantec nearly six years ago. Columbia alleges that Symantec's Norton Antivirus software infringed on two of Columbia's patents.⁶ (ECF No. 12.) Symantec now contends that the remaining patent claims of those two patents do not constitute valid patentable ideas under 35 U.S.C. § 101 because the patent claims are directed to an abstract idea and lack an inventive concept. Because years of litigation have significantly reduced the issues this Court must address, the Court will first summarize this matter's procedural history and will then address the contours of the specific patent claims at issue.

³ On August 1, 2019, the Court held a technology hearing, during which Columbia and Symantec jointly offered a patent litigation presentation and separately demonstrated the patents at issue.

⁴ "The district courts shall have original jurisdiction of all civil actions arising under the Constitution, laws, or treaties of the United States." 28 U.S.C. § 1331.

⁵ In addition to its patent infringement claims, Columbia also raised five claims for relief arising out of one patent owned by Symantec, Patent No. 8,549,643 (the "643 Patent"), which Columbia believes Symantec unlawfully obtained. The Court has stayed Columbia's challenges to the 643 Patent and those challenges do not affect the Court's analysis on the Motion for Judgment.

⁶ Columbia originally asserted that Symantec infringed upon six of its patents, however, subsequent litigation significantly narrowed this litigation to two patents—Patent No. 8,074,115 (the "115 Patent") and Patent No. 8,601,322 (the "322 Patent"). These two patents "share a specification and relate to detecting anomalous program executions." *Trs. of Columbia Univ. in the City of New York v. Symantec Corp.*, 811 F.3d 1359, 1362 (Fed. Cir. 2016).

The other four patents—Patent No. 7,487,544 (the "544 Patent"); Patent No. 7,979,907 (the "907 Patent"); Patent No. 7,448,084 (the "084 Patent"); and Patent No. 7,913,306 (the "306 Patent")—are no longer before the Court. "The [544 and 907 patents share the same specification and relate to detecting malicious email attachments. The [084 and 306 patents share the same specification, and relate to a method for detecting intrusions in the operation of a computer system." *Id.*

A. Relevant Procedural Background

The Court provided an in-depth discussion of the procedural history in its prior Memorandum Opinions—the *Inter Partes Review* Opinion, (ECF No. 251), and the Markman Opinion, (ECF No. 253)—and incorporates that description here. The Court assumes familiarity with those decisions and provides only a summary of the procedural history prior to the Motion for Judgment.

After Columbia filed its Amended Complaint, (ECF No. 12), Symantec filed an Answer, (ECF No. 20), asserting, in relevant part, that the patent claims included in Columbia’s patents do not constitute valid patent claims under 35 U.S.C. § 101.⁷ Following an initial pretrial conference, the Court held a Markman hearing and issued a Claim Construction Order (the “Claim Construction Order”), (ECF No. 123), and a Clarified Claim Construction Order (the “Clarified Claim Construction Order”), (ECF No. 146).

Ten days later, based on the Court’s Clarified Claim Construction Order, Columbia and Symantec jointly moved the Court to issue final judgment pursuant to Federal Rule of Civil Procedure 54(b)⁸ as to Columbia’s first through sixth claims for relief and staying the case as to its seventh through eleventh claims. (Jt. Mot. Entry Final J. 1–2, ECF No. 148.) The Parties

⁷ Based on the Court’s decision in the *Inter Partes Review* Opinion, Symantec may no longer support its invalidity affirmative defense with the prior art identified in its invalidity contentions but not raised in its petitions for *inter partes review* before the Patent Trial and Appeal Board (“PTAB”). *Trs. of Columbia Univ. in the City of New York v. Symantec Corp.*, 390 F. Supp. 3d 665, 681 (E.D. Va. 2019). Of course, Symantec asserts other defenses which remain before the Court: limitation on damages and recovery, dedication to the public, no entitlement to an injunction or other equitable relief, unavailability of enhanced damages, unavailability of unjust enrichment, unavailability of conversion, and preemption by federal patent law.

⁸ Federal Rule of Civil Procedure 54(b) provides: “When an action presents more than one claim for relief . . . the court may direct entry of a final judgment as to one or more, but fewer than all, claims . . . only if the court expressly determines that there is no just reason for delay.” Fed. R. Civ. P. 54(b).

specifically asked the Court to enter “judgment of non-infringement on all asserted claims and [to] find[] . . . invalidity for indefiniteness of claims 1 and 16 of the [544 [P]atent.” *Trs. of Columbia Univ.*, 811 F.3d at 1362. The next day, the Court entered the partial final judgment requested by Columbia and Symantec⁹ (the “Partial Final Judgment Order”). (ECF No. 150.)

Approximately one week later, having seemingly lost its case in this Court, Columbia filed its Notice of Appeal to the Federal Circuit and appealed the Court’s Partial Final Judgment Order, the Court’s original Claim Construction Order, and the Court’s Clarified Claim Construction Order. (Notice Appeal 1, ECF No. 152.) In a 2016 opinion, the Federal Circuit affirmed in part and reversed and remanded in part the Court’s grant of final judgment and its claim construction orders. *See Trs. of Columbia Univ.*, 811 F.3d at 1371. Specifically, the Federal Circuit upheld the judgment of non-infringement as to the 544, 907, 084, and 306 patents. *Id.* at 1366–67, 1369. With regard to the 115 and 322 patents—the patents at issue in the Motion for Judgment—the Federal Circuit “reverse[d] the district court’s construction of ‘anomalous,’” and the Court’s stipulated judgment as to the 115 and 322 patents. *Id.* at 1371. The Federal Circuit then remanded for proceedings consistent with its opinion. *Id.*

After the Court issued its Partial Final Judgment Order and while the Federal Circuit considered Columbia’s appeal from that order, Symantec, who prevailed below, filed petitions with the Patent Trial and Appeal Board (“PTAB”) of the United States Patent and Trademark Office (“PTO”) requesting, in relevant part, *inter partes review* of the 115 and 322 patents at issue in the litigation. (Notice Pets. *Inter Partes Review* 1, ECF No. 158.)

Syantec presented only a subset of its grounds of purported invalidity to the PTAB and the PTAB instituted *inter partes review* on all of Syantec’s asserted grounds. The PTAB

⁹ The Parties requested that the Court enter partial final judgment “to allow Columbia to take an immediate appeal of” the Claim Construction Order and the Clarified Claim Construction Order. (Mem. Supp. Summ. J. Mot. 8, ECF No. 199.)

issued separate final written decisions as to the 115 Patent and the 322 Patent. In these decisions, the PTAB found *patentable* under 35 U.S.C. §§ 102 and 103 twelve claims of the 115 Patent—2, 9, 10, 12, 19, 20, 23, 30, 31, 33, 40, and 41—and six claims of the 322 Patent—2, 8, 11, 17, 25, and 27. *Symantec Corp. v. Trs. of Columbia Univ. in the City of New York*, IPR 2015-00375 (P.T.A.B. June 30, 2016); *Symantec Corp. v. Trs. of Columbia Univ. in the City of New York*, IPR 2015-00377 (P.T.A.B. June 30, 2016). The PTAB found that Columbia could *not* patent the thirty remaining claims of the 115 Patent and the twenty-one remaining claims 322 Patent. *Id.*

In 2018, in an assessment separate from its 2016 decision regarding this Court’s Claim Construction Orders, the Federal Circuit affirmed the PTAB’s decisions as to the validity of the patent claims in the 115 and 322 Patents in all respects. *Trs. of Columbia Univ. in the City of New York v. Symantec Corp.*, 714 F. App’x 1021, 1022 (Fed. Cir. 2018).¹⁰

Upon return to this Court, Columbia filed a Motion for Partial Summary Judgment, (ECF No. 198), and Symantec filed a Motion to Permit Additional Claim Construction Proceedings (the “Markman Motion”), (ECF No. 204). The Court granted Columbia’s Motion for Partial Summary Judgment, which precludes Symantec from relying on prior art arguments that it did not raise during *inter partes review* before the PTAB. *See Trs. of Columbia Univ. in the City of New York v. Symantec Corp.*, 390 F. Supp. 3d 665, 679 (E.D. Va. 2019) (hereinafter the “*Inter Partes Review Opinion*”). The Court also granted Symantec’s Markman Motion, allowing the Parties to conduct additional Markman briefing on the proper definition of “anomalous” and “model of function calls for the at least a [part/portion] of the program.” *See Trs. of Columbia*

¹⁰ The Federal Circuit addressed the PTAB’s *inter partes review* decisions as to the 115 Patent and the 322 Patent in a single opinion. *See Trs. of Columbia Univ.*, 714 F. App’x at 1022.

Univ. in the City of New York v. Symantec Corp., No. 3:13cv808, 2019 WL 2774321 (E.D. Va. July 2, 2019) (hereinafter the “Markman Opinion”).

While the Motion for Partial Summary Judgment and the Markman Motion were still pending, Symantec filed the Motion for Judgment. The Court initially stayed briefing on the Motion for Judgment because resolution of Columbia’s Motion for Partial Summary Judgment “w[ould] likely affect the required briefing for the Motion for Judgment.” (May 30, 2019 Order 1, ECF No. 248.) The Court later granted Columbia’s Motion for Summary Judgment—which precludes Symantec from relying on prior art that it could have, but chose not to, raise before the PTAB in *inter partes review*. (July 2, 2019 Order 1, ECF No. 252.)

Following an August 1, 2019 Court Conference, the Court lifted the stay imposed on the Parties’ briefing on the Motion for Judgment. (Aug. 5, 2019 Order 1, ECF No. 263.) Columbia filed its response to the Motion for Judgment and Symantec replied. With leave of Court, Columbia filed a sur-reply to Symantec’s reply.

B. Factual Background¹¹

All Parties recognize that the nearly six-years of litigation have significantly narrowed the matters before the Court.¹² Specifically, following both the appeal from this Court’s prior orders and the appeal from the PTAB’s *inter partes review* decisions, only three patents remain

¹¹ “A motion for judgment on the pleadings under Rule 12(c) is assessed under the same standards as a motion to dismiss under Rule 12(b)(6).” *Occupy Columbia v. Haley*, 738 F.3d 107, 115 (4th Cir. 2013) (citing *Edwards v. City of Goldsboro*, 178 F.3d 231, 243 (4th Cir. 1999)). For the purpose of a Rule 12(b)(6) Motion to Dismiss, “a court ‘must accept as true all of the factual allegations contained in the complaint’ and ‘draw all reasonable inferences in favor of the plaintiff.’” *Kensington Volunteer Fire Dep’t, Inc. v. Montgomery Cty., Md.*, 684 F.3d 462, 467 (4th Cir. 2012) (quoting *E.I. du Pont de Nemours & Co. v. Kolon Indus.*, 637 F.3d 435, 440 (4th Cir. 2011)).

¹² Neither Columbia nor Symantec disputes that the PTAB’s decisions as to the patentability of the 115 Patent and the 322 Patent leaves only eighteen claims in active dispute.

at issue: the 115 Patent, the 322 Patent, and the 643 Patent.¹³ Only those twelve patent claims in the 115 Patent and six patent claims in the 322 Patent that the PTAB found valid survive.

Symantec's affirmative defenses have also been narrowed by this Court's decision in the *Inter Partes Review* Opinion such that it may no longer rely on the prior art arguments that it chose not to raise before the PTAB. *Inter Partes Review* Opinion, 390 F. Supp. 3d at 668. In the Motion for Judgment, Symantec seeks a judgment from this Court that the remaining patent claims of the 115 Patent and 322 Patent¹⁴ do not constitute valid patent claims under 35 U.S.C. § 101. (Mot. Judgment 1.)

The 322 Patent is a “[c]ontinuation of” the 115 Patent. (322 Patent 1.) The two patents share a “common specification,” which states that they contain “[m]ethods, media, and systems for detecting anomalous program executions.” (Resp. Mot. Judgment 3, ECF No. 264; 322 Patent 1:49–50.) Columbia asserts that the

inventions of the 115 and 322 [P]atents share several common features including: (1) running at least a part of the program being monitored for malware in an “emulator”; (2) comparing one or more of the function calls made by the program in the emulator to a “model of function calls”; (3) identifying ‘anomalous’ function calls based on comparison with the model; and (4) notifying an “application community” of the anomalous function call.

(Resp. Mot. Judgment 3–4 (citing 322 Patent 2:20–26, 6:31–33).) Claim 2 of the 322 Patent represents the remaining patent claims:

A method for detecting anomalous program executions, comprising:
executing at least a portion of a program in an emulator;

¹³ Neither appeal concerned the 643 Patent because in 2014 this Court stayed the case as to Columbia's challenges to the 643 patent prior to entering partial final judgment. Each of Columbia's original seventh through eleventh causes of action, which address the 643 Patent, remain.

¹⁴ The twelve disputed patent claims of the 115 Patent are: 2, 9, 10, 12, 19, 20, 23, 30, 31, 33, 40, and 41. The six surviving patent claims of the 322 Patent are: 2, 8, 11, 17, 25, and 27.

comparing a function call made in the emulator to a model of function calls for the at least a portion of the program, wherein the model is a combined model created from at least two models created using different computers; and

identifying the function call as anomalous based on the comparison.

(322 Patent 20:47–55.) Claim 11 of the 322 Patent constitutes “[a] non-transitory computer-readable medium containing computer-executable instructions that, when executed by a processor, cause the processor to perform a method for detecting anomalous program executors, comprising” the same method from claim 2. (*Id.* 21:20–30.) Claim 27 of the 322 Patent sets forth the same method from claim 2, but constitutes a “system for detecting anomalous program executions.” (*Id.* 22:38–48.) The 115 Patent, which preceded the 322 Patent, includes a similar method. (*See* 115 Patent 20:37–46.)

In addition to those patent claims described above, the remaining claims of the 115 Patent and the 322 Patent are dependent patent claims because they seek to add limitations to the independent patent claims upon which they depend. These dependent claims can be grouped into four types: (1) application community claims; (2) indicator claims; (3) combined model claims; and, (4) random model claims. The groups are as follows:

- (1) **The “application community claims”**—claims 2, 9, 10, 12, 19, and, 20 of the 115 Patent—depend upon a method or medium that requires the invention to notify an “application community” when it identifies an anomaly. (*See, e.g.*, 115 Patent 20:36–46.)
- (2) **The “indicator claims”**—claims 23, 30, 31, 33, 40, and, 41 of the 115 Patent—depend upon a method or medium that “modif[ies] a program to include indicators of program-level function calls being made during execution of the program.” (*See, e.g., id.* 21:50–62.)
- (3) **The “combined model claims”**—claims 2, 12, 23, and 33 of the 115 Patent—seek to limit the method and medium from which they depend by requiring that the model constitute a “combined model from at least two models created using different computers.” (*See, e.g., id.* 20:47–49.)

- (4) **The “random model claims”**—claims 9, 10, 19, 20, 30, 31, 40, and, 41 of the 115 Patent and claims 8, 17, and, 25 of the 322 Patent—seek to limit the method or medium from which they depend by requiring the invention “randomly select[]” the model or portion of the model against which the comparison will be made. (*See, e.g., id.* 20:65–67; 21:1–2.)

II. Standard of Review

A. Motion for Judgment on the Pleadings: Rule 12(c)

Federal Rule of Civil Procedure 12(c) allows a party to move for judgment on the pleadings “[a]fter the pleadings are closed—but early enough not to delay trial.” Fed. R. Civ. P. 12(c). “A motion for judgment on the pleadings under Rule 12(c) is assessed under the same standards as a motion to dismiss under Rule 12(b)(6).” *Occupy Columbia v. Haley*, 738 F.3d 107, 115 (4th Cir. 2013) (citing *City of Goldsboro*, 178 F.3d at 243). “A Rule 12(c) motion for judgment on the pleadings therefore is also analyzed for compliance with the Supreme Court’s holdings in *Ashcroft v. Iqbal*, 556 U.S. 662 (2009), and *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544 (2007).” *U.S. v. Sum of Three Hundred Nine Million Five Hundred Thousand Dollars*, 85 F. Supp. 3d 111, 115 (D.D.C. 2015) (citations omitted).

“It is axiomatic . . . that for purposes of the court’s consideration of the Rule 12(c) motion, all of the well pleaded factual allegations in the adversary’s pleadings are assumed to be true and all contravening assertions in the movant’s pleadings are taken to be false.” 5C ARTHUR R. MILLER, ET AL., FEDERAL PRACTICE AND PROCEDURE § 1368 (3d ed. 2019) (citing cases). Similar to a Rule 12(b)(6) motion, the Court must view all “the inferences to be drawn [from the facts] in the light most favorable to the nonmoving party.” *Id.* “To survive a motion for judgment on the pleadings, a pleading need only provide a short and plain statement of the claim showing that the pleader is entitled to relief, in order to give the defendant fair notice of what . . . the claim is and the grounds upon which it rests.” *Sum of Three Hundred Nine Million*

Five Hundred Thousand Dollars, 85 F. Supp. 3d at 115 (citing *Twombly*, 550 U.S. at 555) (internal quotation marks omitted). “Patent eligibility can be determined on the pleadings under Rule 12(c) when there are no factual allegations that, when taken as true, prevent resolving the eligibility question as a matter of law.” *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1007 (Fed. Cir. 2018) (citing *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1125 (Fed. Cir. 2018); *Berkeimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018)).

B. Statutory Presumption of Validity: 35 U.S.C. § 282(a)

The Court begins, as it must, by presuming that the patent and patent claims are valid.

See 35 U.S.C. § 282(a). Section 282(a) provides, in relevant part:

A patent shall be presumed valid. Each claim of a patent . . . shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim. The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

35 U.S.C. § 282(a). The party challenging the validity of a patent must “prov[e] the invalidity of each claim by clear and convincing evidence.” *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Assoc.*, 776 F.3d 1343, 1348 (Fed. Cir. 2014) (citing *Dana Corp. v. Am. Axle & Mfg., Inc.*, 279 F.3d 1372, 1376 (Fed. Cir. 2002)).

III. Analysis

In the 115 Patent and the 322 Patent, Columbia seeks to patent “[m]ethods, media, and systems for detecting anomalous program executions.” (115 Patent 1:48–49; 322 Patent 1:49–50.) The common specification makes clear that these ideas pertain to computer software innovations and suggested improvements to computer virus scanning. Columbia contends that Symantec’s Norton anti-virus software infringes on the surviving patent claims. Symantec

asserts, however, that the remaining patent claims are invalid abstract patent claims under 35 U.S.C. § 101.

To decide the Motion for Judgment, the Court will first introduce the legal standard by which it must evaluate this § 101 challenge. It will then turn to its determination that the patent claims are not invalid abstract claims based on the computer improvement standard of the first step of a § 101 analysis. This conclusion stems from the common specification of the 115 Patent and the 322 Patent which demonstrates that these patents improve computer functionality by enhancing computer virus scanning through the use of innovative models and increases to computer efficiency. At the very least, Symantec does not present clear and convincing evidence otherwise. Federal Circuit precedent, should the Court rely on it, further bolsters this conclusion. Finally, the Court will turn to Symantec's arguments regarding the PTAB's findings in *inter partes review*, which do not compel a different result.

A. Legal Standard: 35 U.S.C. § 101, Generally

Section 101 provides that “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. In *Alice Corporation Pty. Ltd. v. CLS Bank International*, the Supreme Court of the United States created a two-step process by which a court must evaluate whether patent claims constitute patentable ideas under § 101. 573 U.S. 208 (2014). Although a court may decide patent eligibility under § 101 on a motion brought pursuant to Rule 12(c), the United States Court of Appeals for the Federal Circuit has stated that “[t]he patent eligibility inquiry [under § 101] may contain underlying issues of fact.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018) (citing *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314,

1325 (Fed. Cir. 2016)). If disputes about these underlying issues of fact exist, judgment under Rule 12(c) may be inappropriate. *See Data Engine Techs. LLC*, 906 F.3d at 1007 (citations omitted).

At the first step of an *Alice* inquiry, the court must consider the patent claims “in light of the specification” and “based on . . . their character as a whole.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)). Through this lens, the Court must “determine whether the claims at issue are directed to one of th[e three] patent-ineligible concepts:” “[l]aws of nature, natural phenomena, and abstract ideas.”¹⁵ *Alice*, 573 U.S. at 217 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 76 (2012); *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). Concerns about impeding innovation led to the patent-ineligible concepts identified at *Alice* step one because “[l]aws of nature, natural

¹⁵ As it relates to the instant Motion for Judgment, “[t]he abstract ideas category embodies the longstanding rule that [a]n idea of itself is not patentable.” *Alice*, 573 U.S. at 217 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)) (internal quotation marks omitted).

The Supreme Court has not established a definitive rule to determine what constitutes an “abstract idea” sufficient to satisfy the first step of the [*Alice* inquiry. Rather both [the Federal Circuit] and the Supreme Court have found it sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases.

Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1334 (Fed. Cir. 2016) (internal citations omitted). Courts have recognized many types of patent claims as directed to abstract ideas. *See, e.g., Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1322 (Fed. Cir. 2016) (holding that patent claims directed to scanning the Internet for computer viruses are abstract); *Content Extraction & Transmission LLC*, 776 F.3d at 1347 (deeming abstract claims directed to the idea of collecting data, recognizing data within the collected data set, and storing that recognized data in a memory); *Ultramercial, Inc. v. Hulu LLC*, 772 F.3d 706, 714–15 (Fed. Cir. 2014) (finding abstract claims directed to displaying an advertisement in exchange for access to copyrighted media).

phenomena, and abstract ideas are the basic tools of scientific and technological work.”¹⁶ *Id.* (quoting *Myriad*, 569 U.S. at 589) (internal quotation marks omitted). However, the Supreme Court has cautioned that a court reviewing a patent must “tread carefully in construing th[e] exclusionary principle lest it swallow all of patent law” because “[a]t some level, ‘all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.’” *Id.* (quoting *Mayo*, 566 U.S. at 70). “If the claims are not directed to a patent-ineligible concept under *Alice* step [one], ‘the claims satisfy § 101 and [the reviewing court] need not proceed to the second step.’” *Data Engine Techs LLC*, 906 F.3d at 1007 (quoting *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1361 (Fed. Cir. 2018)).

If the claims are directed to patent-ineligible concepts (such as an abstract idea) then the court must proceed to *Alice* step two and “ask ‘[w]hat else is there in the claims before us?’” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78). The court will “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 78–79). This step represents “a search for an inventive concept—*i.e.*, an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.” *Id.* at 217–18 (quoting *Mayo*, 566 U.S. at 72–73) (internal quotation marks omitted). If the court finds that the patent claims are directed to a patent ineligible idea and the patent does not apply them in an “inventive” way, the patent fails to satisfy the § 101 standard, meaning that the Court must invalidate those patent claims. *See id.*

¹⁶ The Supreme Court has recognized that in determining whether a patent claim is directed to a patent-ineligible concept, the reviewing court must “distinguish between patents that claim the buildin[g] block[s] of human ingenuity and those that integrate the building blocks into something more, thereby transform[ing] them into a patent-eligible invention.” *Alice*, 573 U.S. at 217 (internal citations and quotation marks omitted).

B. The Remaining Patent Claims of the 115 and 322 Patents Are Not Invalid Abstract Ideas

The Court need not proceed to the second step of *Alice* because, viewing all well-pleaded factual allegations favorably, the remaining patent claims are not invalid abstract concepts. Because Symantec asserts that the remaining patent claims do not constitute valid patent concepts under § 101, Symantec bears the burden of establishing such invalidity by “clear and convincing evidence.” 35 U.S.C. § 282(a); *Content Extraction & Transmission LLC*, 776 F.3d at 1348.

Here, Symantec argues that the remaining patent claims of the 115 Patent and the 322 Patent fail to satisfy § 101 because the claims constitute only invalid abstract ideas and the patent inventors did not apply them in an inventive way. Specifically, Symantec characterizes the remaining patent claims as encompassing only an “Executing Step,” a “Comparing Step,” and an “Identifying Step,” asserting that such general claims do not fulfill the requirements of § 101 under existing case law. (Mem. Supp. Mot. Judgment 5, ECF No. 246.)

However, based on the “common specification” of the 115 Patent and the 322 Patent¹⁷ and the representative claim 2 of the 322 Patent,¹⁸ the surviving patent claims of the 115 Patent

¹⁷ Because the 322 Patent represents a continuation of the 115 Patent and each patent addresses a similar process, the Court will discuss both patents together.

¹⁸ Symantec contends that claim 2 of the 322 Patent is representative of the remaining patent claims of the 115 Patent and the 322 Patent. (See Mem. Supp. Mot. Judgment 6.) Although Columbia does not explicitly state that claim 2 is representative of the remaining patent claims, it states that claim 2 of the 322 Patent, among others, is “a good starting point.” (Resp. Mot. Judgment 4.) Columbia also states that “[f]or purposes of the § 101 analysis, there are no relevant differences between the claims [it] discussed . . . and the other [a]sserted [c]laims.” (*Id.* 4 n.2.) Although both Columbia and Symantec discuss briefly other surviving patent claims, both Parties’ arguments center on the method provided in claim 2.

The Court will focus its analysis on claim 2 of the 322 Patent as well. Claim 2 of the 322 Patent purports to patent the general method at issue and the remaining patent claims “are substantially similar and linked to the same . . . idea.” *Content Extraction & Transmission LLC*, 776 F.3d at 1348 (citations omitted). For this reason, the Court will presume for purposes of the

and the 322 Patent constitute specific improvements in computer functionality, such that they satisfy *Alice* step one. Because the remaining claims satisfy *Alice* step one, the Court need not determine whether Columbia applied the patent claims in an inventive way under *Alice* step two. This determination alone satisfies the standard of § 101.

1. Computer Improvements Under *Alice* Step One

In creating the *Alice* test, the Supreme Court did not “delimit the precise contours of the ‘abstract ideas’ category.” *Alice*, 573 U.S. at 221. In attempting to refine these limits, the Federal Circuit has “declined to read *Alice* ‘broadly [to] hold that all improvements in computer-related technology are inherently abstract and, therefore, must be considered at step two.’” *Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1315 (Fed. Cir. 2019) (quoting *Enfish*, 822 F.3d at 1335). Rather, “[i]n cases involving software innovations,” *Alice* step one “often turns on whether the claims focus on ‘the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an “abstract idea” for which computers are invoked merely as a tool.’” *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1303 (Fed. Cir. 2018) (quoting *Enfish*, 822 F.3d at 1335–36). The Federal Circuit has found that both hardware and software changes can improve computers and can be non-abstract ideas under *Alice* step one. *Ancora Techs., Inc. v. HTC Am., Inc.*, 908 F.3d 1343, 1347 (Fed. Cir. 2018) (citing *Enfish*, 822 F.3d at 1335).

Importantly, the Federal Circuit has previously held that, “[b]y itself, virus screening is well-known and constitutes an abstract idea.” *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1319 (Fed. Cir. 2016). It has also “found that performing the virus scan on an

Motion for Judgment that claim 2 of the 322 Patent is representative of the remaining patent claims in the 115 Patent and the 322 Patent, and will therefore address only claim 2 of the 322 Patent throughout its § 101 analysis. *See id.* (stating that a reviewing court need not provide a separate analysis of each patent claim when it finds a patent claim representative of the other patent claims).

intermediary computer—so as to ensure that files are scanned before they can reach a user’s computer—is a ‘perfectly conventional’ approach and is also abstract.” *Finjan, Inc.*, 879 F.3d at 1304 (quoting *Intellectual Ventures I LLC*, 838 F.3d at 1321). However, when the patent claims disclose an idea that does more—such as attaching a security profile to a downloadable file “before a web server makes the [d]ownloadable available to web clients”—the patent claims are not abstract ideas and satisfy the requirements of § 101. *Id.* at 1303–04. With that finding, articulated below, this reviewing Court need not proceed to the second step of *Alice*.

2. The Remaining Patent Claims Constitute an Improvement in Computer Virus Scanning

Here, given the statutory presumption of patent validity and viewing all well-pleaded factual allegations favorably, Symantec has not shown by clear and convincing evidence that Columbia’s patent claims are abstract and invalid under § 101. Rather, the remaining patent claims improve computer functionality by improving computer virus scanning in at least two ways: (1) the creation of unique models and (2) improvements in efficiency. Claim 2 of the 322 Patent is representative of the overall idea of the patent claims remaining at issue in this litigation. It states:

A method for detecting anomalous program executions, comprising:

executing at least a portion of a program in an emulator;
comparing a function call made in the emulator to a model of function calls for the at least a portion of the program, wherein the model is a combined model created from at least two models created using different computers; and

identifying the function call as anomalous based on the comparison.

(322 Patent 20:47–55.)¹⁹ The Court previously construed “emulator” to mean “[s]oftware, alone or in combination with hardware, that permits the monitoring and selective execution of certain

¹⁹ Symantec urges the Court to construe the surviving patent claims to be no more than an Executing Step, a Comparing Step, and an Identifying Step. (Mem. Supp. Motion Judgment 2.)

parts, or all, of a program.” (Claim Construction Order 2, ECF No. 123.) Similarly, the Court construed “application community” to mean “[m]embers of a community running the same program or a selected portion of the program.” (*Id.*)

This Court has previously ordered an additional Markman hearing to determine the proper meaning of “anomalous” and “model of function calls for the at least a [part/portion] of the program.” *Markman Opinion*, 2019 WL 2774321, at *10. The Federal Circuit “reverse[d]” the earlier definition of anomalous²⁰ and the Parties initially disputed its definition here. But Columbia now states that it “will stipulate to Symantec’s proposed construction of ‘anomalous,’” (Columbia Resp. Not. Proposed Schedule 2, ECF No. 282), so the Court will utilize Symantec’s use of “deviating from normal,” (Mem. Supp. Markman Mot. 3, ECF No. 205). Because all inferences must be drawn in favor of Columbia when deciding this Rule 12(c) motion, 5C ARTHUR R. MILLER, ET AL., FEDERAL PRACTICE AND PROCEDURE § 1368, the Court will apply

This reading runs counter to the Supreme Court’s admonition that a reviewing court must “tread carefully in construing th[e] exclusionary principle” of *Alice* step one “lest it swallow all of patent law” because “[a]t some level, ‘all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.’” *Alice*, 573 U.S. at 217 (citations omitted). It also contravenes Federal Circuit precedent which states that “describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule.” *Enfish*, 822 F.3d at 1337 (citing *Alice*, 573 U.S. at 217).

Because Symantec’s proffered description of the remaining patent claims “describ[es] the claims at such a high level of abstraction,” that it nearly ensures that the Court would deem the claims abstract, the Court declines to accept Symantec’s proffered definition and will instead utilize the language of the 322 Patent’s specification and patent claims. *See id.* As required by the Federal Circuit, the Court will consider the remaining patent claims “in light of the specification” and “as a whole.” *Id.* at 1335 (citations omitted).

²⁰ *See Trs. of Columbia Univ. in the City of New York v. Symantec Corp.*, 811 F.3d at 1370–71.

The initial Claim Construction Order defined “anomalous” in the 115 Patent and the 322 Patent as meaning “[d]eviation/deviating from a model of typical, attack-free computer system usage.” (Claim Construction Order 2.) In its Clarified Claim Construction Order, the Court looked to claim 1 of the 084 Patent for guidance and concluded that the model to which anomalous referred “is generated with only attack-free data.” (Clarified Claim Construction Order 2.)

only Columbia's proffer of the plain meaning of "model of function calls for the at least a [part/portion] of the program" in this analysis.

Although the Federal Circuit has previously found that "[b]y itself, virus screening is well-known and constitutes an abstract idea," *Intellectual Ventures I*, 838 F.3d at 1319, it has also concluded that computer virus scanning patents may contain non-abstract ideas, *see Finjan*, 879 F.3d at 1306. Here, the Court must consider both the specification of the 322 Patent and its claims "as a whole." *See Enfish*, 822 F.3d at 1335.

As to the first improvement—creation of unique models—the common specification mentions that "[m]odel sharing can result in one standard model that an attacker could potentially access and use to craft a mimicry attack." (322 Patent 6:54–56.) The 322 Patent corrects this issue by creating "unique and diversified models . . . by randomly choosing particular features from the application execution that is modeled, such that the various application instances compute distinct models." (*Id.* at 6:58–61.) The specification suggests that "[c]reating unique and diversified models not only has the advantage of being more resistant to mimicry attacks, but also may be more efficient." (*Id.* at 6:63–65.) The specification lists several ways in which these models can be created, including "rather than expunging the old model, a newly created model can be algorithmically combined with the older model" and "two distinct models may be computed by two distinct instances of an application by two distinct devices." (*Id.* 8:25–26; 8:42–44.) Columbia also translates this improvement into the patent claims by specifying that "the model is a combined model created from at least two models created using different computers." (*Id.* 20:52–53.)

As to the second improvement—efficiency—Columbia identifies another problem with computer virus scanning at the time of the patents: "that a single application instance may have

to be run many times (e.g., thousands of times) in order to compute an application profile or model.” (*Id.* 7:56–58.) The 322 Patent seeks to improve this via “distributed sensors whose data is correlated among many (e.g., a thousand) application community members can be used to compute a substantially accurate code profile in a relatively short amount of time.” (*Id.* 7:58–62.)

Given the statutory presumption of patent validity, *see* 35 U.S.C. § 282(a), and the standard of review appropriate when reviewing a Rule 12(c) motion, Symantec has failed to show by clear and convincing evidence that these purported improvements are invalid abstract ideas. *See* 35 U.S.C. § 282(a); *Content Extraction & Transmission LLC*, 776 F.3d at 1348. These innovations improve computer functionality by improving computer virus scanning.

3. The Surviving Patent Claims More Closely Mirror Those Found Not Abstract in *Finjan* Than Those Found Abstract in *Intellectual Ventures I*

Based on this review of the common specification, the remaining claims of the 115 Patent and the 322 Patent do not encompass invalid abstract ideas. Should the Court need to do so, it could articulate a second basis to make the same finding by turning to two Federal Circuit cases, *Finjan* and *Intellectual Ventures I*, both of which considered computer virus scanning patents.²¹ The Court concludes that the remaining patent claims more closely mirror those that constituted valid patent claims in *Finjan* than those deemed invalid abstract patent claims in *Intellectual Ventures I*.²²

²¹ While the Supreme Court has not “delimit[ed] the precise contours of the ‘abstract ideas’ category,” *Alice*, 573 U.S. at 221, both the Federal Circuit and the Supreme Court “have found it sufficient to compare claims at issue to those claims already found to be directed to an abstract idea in previous cases,” *Enfish, LLC*, 822 F.3d at 1334.

²² In support of its Motion for Judgment, Symantec relies on several cases that find various patents invalid under § 101. However, these cases are readily distinguished from the case at bar because the patents in those cases did not relate to computer virus scanning. In fact,

In *Finjan*, the Federal Circuit considered a computer virus screening patent claim that made an improvement in computer virus scanning. It read:

A method comprising:

receiving by an inspector a Downloadable;

generating by the inspector a first Downloadable security profile that identifies suspicious code in the received Downloadable; and

linking by the inspector the first Downloadable security profile to the Downloadable before a web server makes the Downloadable available to web clients.

879 F.3d at 1303. The Federal Circuit affirmed the district court’s finding that the ideas contained in the patent did not constitute abstract ideas. *Id.* at 1305–06. In making this

Symantec did not address *any* case involving a computer virus scanning patent until its reply to Columbia’s response to the Motion for Judgment.

For example, Symantec relies on a different *Intellectual Ventures* case—*Intellectual Ventures I LLC v. Erie Indemnity Company*, 711 Fed. App’x 1012 (Fed. Cir. 2017)—that does not persuade. In *Erie*, the Federal Circuit evaluated a patent that “purport[ed] to improve upon the prior art by providing a method and apparatus to detect ‘undesirable files’ ‘stored on computer storage devices’ ‘according to pre-set criteria.’” *Id.* at 1014. Specifically, the patent aimed to identify illegal or illicit files such as child pornography or copyrighted music files. *Id.* One of the reasons the Federal Circuit deemed the patent claims invalid abstract ideas was that Federal Circuit precedent established that “the idea of performing a search to ferret out sources of unwanted material ‘based on characteristics’ of the source . . . and the idea of ‘recognizing certain data’ within a set, without regard to the individual criteria” constituted abstract ideas. *Id.* at 1016.

Erie provides little support for Symantec’s argument that the remaining claims of the 115 Patent and the 322 Patent are abstract ideas. First, the Federal Circuit explicitly recognized in *Erie* that “there is a distinct difference between software designed to root out malware, a concept the USPTO notes is ‘inextricably tied to computer technology,’ . . . and software designed to automate processes of file categorization and extraction like the claims of the” patent at issue in *Erie*. *Id.* at 1017 (internal citation omitted). Tellingly, the 322 Patent contains “[m]ethods, media, and systems for detecting anomalous program executions,” which include computer virus threats, (322 Patent 1:49–50), the very type of patent against which the Federal Circuit contrasted the patent in *Erie*. Second, as the specification to the 322 Patent explains, the 322 Patent protects against computer viruses which seek to attack a computer. It does not simply search the files already located on the computer, meaning that the 322 Patent serves a different purpose than the patent in *Erie*. For these reasons, *Erie* does not support to Symantec’s contention that the remaining claims of the 115 Patent and the 322 Patent constitute abstract patent claims.

Because the remaining cases on which Symantec relies do not involve computer virus scanning patents, they too lend little support to Symantec’s arguments.

determination, the Federal Circuit looked to its prior holding in *Intellectual Ventures I* and stated that the claim in *Finjan* “does a good deal more.” *Id.* at 1304. Specifically, the Federal Circuit stated that the process specified in the patent claim distinguished itself from the “traditional, ‘code-matching’ virus scans” and could “be used to protect against previously unknown viruses as well as ‘obfuscated code.’” *Id.* It also stated that *Finjan* “pioneered” the “‘behavior-based’ approach to virus scanning.” *Id.* In concluding that the patent claims in *Finjan* represented non-abstract patent claims, the Federal Circuit stated “[t]he security profile approach allows access to be tailored for different users and ensures that threats are identified before a file reaches a user’s computer. The fact that the security profile ‘identifies suspicious code’ allows the system to accumulate and utilize newly available behavior-based information about potential threats.” *Id.* at 1305. Based on this, the *Finjan* court ultimately held that “[t]he asserted claims are therefore directed to a non-abstract improvement in computer functionality, rather than the abstract idea of computer security writ large.” *Id.*

Unlike here where the patent claims relate to a specific improvement in computer functionality, in *Intellectual Ventures I*, the Federal Circuit considered a patent claim that generally related to using computer virus scanning software on the Internet without making any specific improvements in the way computer virus scanning functioned. 838 F.3d at 1319. The *Intellectual Ventures I* patent read:

A virus screening method comprising the steps of:

routing a call between a calling party and a called party of a telephone network;

receiving, within the telephone network, computer data from a first party selected from the group consisting of the calling party and the called party;

detecting, within the telephone network, a virus in the computer data; and

in response to detecting the virus, inhibiting communication of at least a portion of the computer data from the telephone network to a second party selected from the group consisting of the calling party and the called party.

Id. The dependent claim stated “[t]he virus screening method of claim 1 further comprising the step of determining that virus screening is to be applied to the call based upon at least one of an identification code of the calling party and an identification code of the called party.” *Id.* The Federal Circuit affirmed the district court’s conclusion deeming the dependent claim an abstract idea because “the idea of virus screening was . . . well known when the . . . patent was filed” in 1998. *Id.* The patent itself acknowledged that “prior to the invention, [m]any computer users [had] virus screening and detection software installed on their computers.” *Id.* (internal quotation marks and citations omitted). Because the dependent claim did not “claim a new method of virus screening or improvement[] thereto” and “require[d] only detecting . . . a virus in the computer data,” the Federal Circuit concluded that the dependent claim constituted only an unpatentable abstract idea. *Id.* (internal quotation marks and citations omitted).

Here, the remaining patent claims more closely mirror those at issue in *Finjan* insofar as they constitute an improvement in computer functionality and improving computer virus scanning.²³ The surviving patent claims are comparable to those in *Finjan* in three important ways. First, like the patent claims in *Finjan*, the 322 Patent’s specification identifies several problems in computer functionality and articulates specifically how the patent sought to correct those problems. *See* 879 F.3d at 1304. Second, similar to the patent claims in *Finjan* which “employ[ed] a new kind of file,” *id.* at 1305, the patent claims in the 322 Patent utilize a new type of model that improves the efficiency of computer virus screening. Third, like the patent

²³ The remaining patent claims of the 115 Patent and the 322 Patent differ from the *Intellectual Ventures I* patent, which was directed only to the idea of “detecting, within the telephone network a virus” and not toward “a new method of virus screening or improvements thereto.” 838 F.3d at 1319.

claims in *Finjan*, which “ensure[d] that threats are identified before a file reaches a user’s computer,” *id.*, the 322 Patent requires “executing at least a portion of a program in an emulator” and then “comparing a function call made in the emulator to a model of function calls . . . and identifying the function call as anomalous based on the comparison,” (322 Patent 20:49–55). As Columbia explained at a prior hearing, “an emulator is just basically a system by which we emulate what that program is going to do without it gaining access to the computer itself.” (Nov. 27, 2018 Transcript 72, ECF No. 234.) The Court has also defined an emulator as “[s]oftware, alone or in combination with hardware, that permits the monitoring and selective execution of certain parts, or all, of a program.” (Claim Construction Order 2.) Therefore, similar to the patent in *Finjan*,²⁴ the 322 Patent would identify a function call as “anomalous” prior to it reaching the user’s computer.²⁵

²⁴ Although the remaining patent claims in the 115 Patent and the 322 Patent are comparable to those claims that the Federal Circuit analyzed in *Finjan*, the Court does not suggest that the *Finjan* patent claims constitute prior art that might render the remaining patent claims invalid under 35 U.S.C. §§ 102 and 103.

²⁵ Symantec’s assertions of invalidity rely heavily on the fact that the 322 Patent’s specification in several instances allows the patent to be expanded beyond a certain type of algorithm or a certain type of model. For instance, the specification states that “[t]he anomaly detection algorithm being used may be, for example, a probabilistic anomaly detection . . . algorithm or a one class support vector machine, . . . or any other suitable algorithm.” (322 Patent 3:16–19.) The specification also provides that “according to various embodiments, rather than expunging the old model, a newly created model can be algorithmically combined with the older model using any of a variety of suitable means.” (*Id.* 8:24–27.) Symantec contends that without specifying a particular algorithm or model, the remaining patent claims must be directed to an abstract idea.

However, Symantec fails to note that the inventors of the patent claims in *Finjan* also did not direct the claims to a specific security profile. *See Finjan*, 879 F.3d at 1303. Specifically, the Federal Circuit noted approvingly that “[t]he security profile approach allows access to be tailored for different users” and that “[t]he fact that the security profile ‘identifies suspicious code’ allows the system to accumulate and utilize newly available, behavior-based information about potential threats.” *Id.* at 1305. Thus, the Federal Circuit implicitly recognized that the security profile could be changed and need not include a certain, specified profile. Thus, Columbia’s decision to allow the patent claims to utilize more than a specified algorithm or

Because Columbia directs its patent claims toward improvements in computer functionality and the remaining patent claims more closely mirror those that the Federal Circuit found not abstract, the surviving patent claims cannot be deemed abstract ideas under Federal Circuit precedent, meaning they survive *Alice* step one.²⁶ Symantec has failed to show by “clear and convincing evidence” that the remaining patent claims of the 115 Patent and the 322 Patent are abstract. *See* 35 U.S.C. § 282(a); *Content Extraction & Transmission LLC*, 776 F.3d at 1348. For these reasons, the Court need not proceed to *Alice* step two in order to determine whether Columbia applied the patent claims in an “inventive” way. *See Data Engine Techs LLC*, 906

pathway to create a model does not require a finding that the patent claims amount to only abstract ideas.

²⁶ Symantec contends that “[t]he abstract nature of the asserted claims is further confirmed by the fact that the claimed invention can be performed by human activity alone.” (Mem. Supp. Mot. Judgment 19.) Although the 322 Patent’s specification does compare the operations used in the claims to “mental operations performed by a human operator,” (322 Patent 19:39–40), this comparison does not render the patent claims abstract.

In *Erie*, as explained *supra* note 22, the Federal Circuit examined a patent that “purport[ed] to improve upon the prior art by providing a method and apparatus to detect ‘undesirable files’ ‘stored on computer storage devices’ ‘according to pre-set criteria.’” *Erie*, 711 Fed. App’x at 1014. The Federal Circuit found support for its conclusion that the patent claims were abstract, in part, because the specification “explicitly note[d] that humans are capable of performing the first two selection criteria.” *Id.* at 1016. The specification also “repeatedly note[d] that selection of errant files generally could be performed by humans.” *Id.* at 1015.

Here, however, the specification of the 322 Patent does not state that humans could perform the method specified in the remaining patent claims. Rather, the specification states that “[n]o such capability of a human operator is necessary, or desirable . . . in any of the operations described herein in connection with various embodiments; the operations are machine operations.” (322 Patent 19:40–43.) The specification itself mandates that the operations be performed on machines, not by humans. Additionally, it appears that Columbia included the reference to a human operator simply to provide further context for what it meant in the specification itself. And, as explained *supra* note 22, the *Erie* court specifically recognized that a virus-scanning patent differed materially from the patent it reviewed, which only sought to identify unwanted files on a computer. *See Erie*, 711 Fed. App’x at 1017 (“[T]here is a distinct difference between software designed to root out malware . . . and software designed to automate processes of file categorization and extraction like the claims” of the *Erie* patent.). Symantec fails to present clear and convincing evidence to support its argument that the surviving patent claims could be performed by humans, rendering them abstract under § 101.

F.3d at 1007. Symantec’s arguments as to the PTAB’s invalidity findings do not compel a different result.

4. Symantec’s Arguments Regarding the PTAB’s Invalidity Findings Under 35 U.S.C. §§ 102 and 103 Do Not Compel a Different Result

The Court has conducted its own investigation of the common specification and the remaining patent claims. It has also compared the remaining claims to Federal Circuit precedent. Based on this analysis, the Court concludes that the remaining patent claims of the 115 Patent and the 322 Patent are not directed to abstract ideas. In an attempt to preclude this result, Symantec relies heavily on the fact that the PTAB previously found several of the patent claims in the 115 Patent and the 322 Patent invalid under 35 U.S.C. §§ 102 and 103. However, these arguments do not compel a finding that the ideas contained in the 115 Patent and the 322 Patent are abstract.

First, to the extent that Symantec attempts to rely on prior art that it could have raised before the PTAB but did not, this Court’s *Inter Partes Review* Opinion concluded that 35 U.S.C. § 315(e) estops such arguments. 390 F. Supp. 3d at 681. This is the law of the case. The Court discourages Symantec from, in the future, arguing against settled legal matters lest it waste judicial resources and muddy any meritorious argument it seeks to raise.

Second, the Supreme Court has stated and the Federal Circuit has recognized that “[t]he ‘novelty’ of any element or steps in a process, or even of the process itself, is of *no relevance* in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.” *Intellectual Ventures I*, 838 F.3d at 1315 (quoting *Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981)). While the Supreme Court has recognized that “the § 101 patent-eligibility inquiry and . . . the § 102 novelty inquiry might sometimes overlap,” it has also noted that the overlap need not always exist. *Mayo*, 556 U.S. at 90.

The PTAB determined that several patent claims of the 115 Patent and the 322 Patent were not novel patent claims under 35 U.S.C. §§ 102 and 103 in light of the asserted prior art. But it found the remaining twelve claims of the 115 Patent and the remaining six claims of the 322 Patent novel. To the extent that the Court may consider the PTAB's findings, they support its conclusion that the surviving patent claims do *not* constitute abstract claims. Columbia no longer asserts that Symantec infringed on the patent claims found invalid by the PTAB. Rather, Columbia relies only on those claims that the PTAB found to be novel over the asserted prior art. Indeed, Columbia and Symantec focus their arguments on the method set forth in claim 2 of the 322 Patent, which the PTAB did not invalidate in *inter partes review*. To the extent the Court may consider the PTAB's *inter partes review* decisions in deciding this Rule 12(c) motion, and to the extent the §§ 102 and 103 inquiries overlap with the § 101 inquiry in this case, the PTAB's conclusions support the Court's decision to deny the Motion for Judgment.

Therefore, Symantec's focus on the PTAB's *inter partes review* decisions as to the 115 and the 322 Patents does not compel a finding that the remaining patent claims are abstract. As such, Symantec has failed to carry its burden to show that the surviving patent claims are invalid under § 101.

IV. Conclusion

For the foregoing reasons, the surviving patent claims of the 115 Patent and the 322 Patent are valid patent claims under 35 U.S.C. § 101. For this reason, the Court will deny the Motion for Judgment. (ECF No. 245.)

An appropriate Order shall issue.

s/ 
M. Hannah Lauck
United States District Judge

Date: 11/19/2019
Richmond, Virginia