UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

INTELLECTUAL VENTURES II LLC,

Plaintiff,

v.

JP MORGAN CHASE & CO., JPMORGAN CHASE BANK, NATIONAL ASSOCIATION, CHASE BANK USA, NATIONAL ASSOCIATION, CHASE PAYMENTECH SOLUTIONS LLC, and PAYMENTECH LLC,

Defendants.

ORDER AND OPINION GRANTING MOTION FOR PARTIAL SUMMARY JUDGMENT

13-cv-3777 (AKH)

ALVIN K. HELLERSTEIN, U.S.D.J.:

Plaintiff Intellectual Ventures II LLC ("Intellectual Ventures") sues Defendants JP Morgan Chase & Co. and subsidiaries ("JPMC") for infringing five patents, each claiming methods related to computer network security. JPMC moves for summary judgment with respect to three of the patents on the basis that they claim patent-ineligible subject matter. *See* 35 U.S.C. § 101. For the reasons discussed in this Opinion, JPMC's motion is granted, and Intellectual Ventures' claims with respect to the three patents are dismissed.

I. BACKGROUND

A. The '694 Patent

U.S. Patent No. 6,826,694, entitled "High Resolution Access Control" (the "'694 Patent"), was issued on November 30, 2004. *See* Decl. Michael A. Feldman Supp. JPMC Mot. Summ. J. ("Feldman Decl."), Exh. H. The '694 Patent recites a single claim drawn to an

allegedly new process for filtering packetized information received by a network's firewall. Claim 1 recites:

> A method for filtering a packet, including the steps of: (a) receiving packet having at least one header parameter and a payload; (b) selecting an access rule based upon the contents of the payload of the packet received in step a; (c) implementing the access rule for a packet, wherein the access rule is selected based upon a combination of the contents of the packet received in step (a) and the contents of at least one other packet.

See id. at 6. The terms of the claim have been defined. A "packet" is a "[d]iscrete unit of information being routed through a computer network, often to a designated addressee." Order Regarding Claim Construction and Patent Summaries ("Markman Order") at 11, 13-cv-3777, ECF No. 82 (S.D.N.Y. Mar. 18, 2014). "Payload" is "[d]ata conveyed by the packet outside the header segment." *Id.* at 12. "Access rule" is "[a] rule for filtering information traveling between a source and a destination." *Id.* at 11.

According to the patent application, digital information can be bundled into "packets" composed of a "header" and a "payload." *Id.* at 2:22-23. A "header" identifies the packet's source and destination, and information necessary to decode the packet upon arrival. *See id.* at 2:26-29. The "payload" consists of the data to be conveyed by the packet from its source to the destination. *See id.* at 2:26-28. Firewalls and other network filters use "access rules" to decide whether a packet, or group of packets, is given access to a network. *See id.* at 1:29-44. Prior art had filtered packets by analyzing solely the information contained in the packet "header" and selecting a rule pre-loaded into the firewall. *See id.* at 1:29-64. The selected rule, in turn, implemented an action of "pass" or "drop," resulting in the packet being denied or allowed access to its destination. *See id.*

The '694 Patent claims an improved method for detecting and preventing entry of a packet containing "malware." The claim describes that by a "rule," constituting part of a "firewall," the packet is guided to an "access control proxy." *See id.* at 3:9-30. The "proxy" analyzes the "header" of the packet, identifying the sender and the intended recipient, the substance of the message of the packet (the "payload"), and the payload of at least one other packet. *See id.* at 3:9-30. An "Access Rule" then is selected and applied either to "pass" or "drop" the packet or packets. *See id.* Intellectual Ventures explains that this method allows filtering systems to identify threats based upon information that may have been "strategically fragmented and hidden in multiple packets." Opp'n Br. at 8. According to the '694 Patent, its method may be implemented by a "general purpose microprocessor" and "any means of storing digital information," such as "Random Access Memory (RAM), a hard disk, a floppy disk, an optical storage medium, or any combination thereof." *See, e.g.*, Feldman Decl., Exh. H at 3:56-4:40. Nothing in the claim or patent description, however, limits the implementation of the method to a particular device or program.

B. The '409 Patent

U.S. Patent No. 6,314,409, entitled "System for Controlling Access and Distribution of Digital Property" (the "'409 Patent"), recites a method that permits an owner or distributor to control access to, and use of, digital property after primary distribution to an authorized user. Intellectual Ventures has asserted infringement of 33 claims of the '409 Patent

consisting of "method," "device," and "system" claims.[1] The parties have agreed that Claim 1 is representative.[2] Claim 1 recites:

> A method of distributing data, the method comprising: (a) protecting portions of the data; and (b) openly distributing the protected portions of the data, whereby (c) each and every access to an unprotected form of the protected portions of the data is limited in accordance with rules defining access rights to the data as enforced by an access mechanism, (d) so that unauthorized access to the protected portions of the data is not to the unprotected form of the protected portions of the data.

Feldman Decl., Exh. O at 35:33-42. "Protected" means "encrypted." *See* Markman Order at 7. "Access rights" are "[p]ermissions that control a user's access to data." *Id.* at 7. "Access mechanism" is "[h]ardware and/or software for controlling access to data." *Id.* at 8.

According to the patent application, the prior art provided a method to protect intellectual property through executable software-based cryptography. *See* Feldman Decl., Exh.

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[1] The method claims include Claims 1-11, 13-21, 23-24. *See* Feldman Decl., Exh. O at 35-40. The device and system claims include Claims 25-27, 29-30, 32-33, 36-40, and 42. *See id.* Claims 1, 21, 23-25, 30, 32, 33, 36, and 38 are independent. *See id.*

[2] A review of the "device" and "system" claims reveals that they are substantively equivalent to the "method" claims. For example, Claim 25 recites:

> A device for displaying images represented by data comprising protected data portions and rules defining access rights to the data, the device comprising: means for storing rules; an access mechanism for accessing the data only in accordance with the rules, whereby user access to an unprotected form of the protected data portions is permitted by the access mechanism only if the rules indicate that the user is allowed to access the protected portions of the data, the access being enforced by the access mechanism; and means for displaying the images represented by the accessed data.

Feldman Decl, Exh. O at 38:1-13. Similarly, Claim 36 recites:

> A process control system comprising a device for controlling access to data, the data comprising protected data portions and rules defining access rights to the data, the device comprising: means for storing the rules; and an access mechanism for accessing the unprotected form of the protected data portions only in accordance with the rules, whereby output of an unprotected form of the protected data portions is permitted by the access mechanism only in such manner as is permitted by the rules.

Feldman Decl, Exh. O at 39:42-40:4. Because all of the claims in the '409 Patent are substantively equivalent to Claim 1, they "rise and fall together" and need not be considered individually. *See Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1341 (Fed. Cir. 2013); *see also Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, No. 12 Civ. 2501, 2013 WL 3964909, at *5 (D.N.J. July 31, 2013) ("Where the claims, as here, are substantially similar and linked to the same abstract idea, the Court is free to dispose of the additional claims in a less detailed fashion." citing *Bilski*, 130 S. Ct. at 3231)).

O at 3:30-43. Authorized users, such as retail consumers, were provided with a decryption key that permitted access and use. *See* Feldman Decl., Exh. O at 3:37-43. However, the prior art was unable to "protect[] the data after it ha[d] been decrypted," leading to various unauthorized uses and secondary distributions, resulting in billions of dollars of lost opportunities. *See* Feldman Decl., Exh. O at 5:4-12 ("In each case, once the data are available to an authorized user, they are basically unprotected and may be copied, modified, or transmitted at will.").

The '409 Patent claims to control post-distribution access. As described in the patent, an owner or distributor first chooses a "data-encrypting algorithm," or set of rules, based on the particular security risk posed by the data, and determines the use to which the data may be put after distribution. *See* Feldman Decl., Exh. O at 11:56-12:53. The algorithm may be packaged with the data by an "authoring mechanism," or sent separately. *See* Feldman Decl., Exh. O at 12:23-26. After distribution of the data, an "access mechanism," with pre-selected rules, controls the nature and extent of a user's access. *See* Feldman Decl., Exh. O at 15:31-35. For example, secondary distribution may be controlled by access rules that limit the subsequent transmission of data, either altogether (*i.e.*, "no output"), or by causing the data to be encrypted, randomized, or destroyed if tampering is detected.[3] *See* Feldman Decl., Exh. O at 17:1-3, 25:63-26:6. The Patent claims that its method may be implemented on varied equipment including, for example, a fax machine, VCR, or computer. *See* Feldman Decl., Exh. O at 7:61-64 ("The device containing the mechanism of the present invention can be a stand-alone device such as a facsimile machine, a television, a VCR, a laser printer, a telephone, a laser disk player, a computer system or the like.").

C. The '084 Patent

[3] Other examples of access rules include prohibitions against executing, modifying, copying, printing, or accessing specified data. *See* Feldman Decl., Exh. O at 23:17-65. Access rules may also limit data use to certain classes of users, such as those over the age of 18. *See* Feldman Decl., Exh. O at 24:53-25:14.

U.S. Patent No. 6,715,084, entitled "Firewall System and Method Via Feedback from Broad-Scope Monitoring for Intrusion Detection" (the "'084 Patent"), claims a method for monitoring multiple computer hosts within a network for anomalies, and alerting the various hosts of possible intrusion. Intellectual Ventures has asserted infringement of 25 "method" and "system" claims.[4] The parties agree that Claim 1 is representative.[5] Claim 1 recites:

> A method of alerting at least one device in a networked computer system comprising a plurality of devices to an anomaly, at least one of the plurality of devices having a firewall, comprising: (a) detecting an anomaly in the networked computer system using network-based intrusion detection techniques comprising analyzing data entering into a plurality of hosts, servers, and computer sites in the networked computer system; (b) determining which of the plurality of devices are anticipated to be affected by the anomaly by using pattern correlations across the plurality of hosts, servers, and computer sites; and (c) alerting the devices that are anticipated to be affected by the anomaly.

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[4] The method claims include Claims 1-7, 9, 12-14, and 16-17. *See* Feldman Decl., Exh. P at 12:19-13:30. The system claims include Claims 19-20, 22-24, and 26-33. *See* Feldman Decl., Exh. P at 13:34-14:57. Claims 1, 9, 19, and 26 are independent.

[5] A review of the system claims reveals that they are substantively equivalent to the method claims. For example, Claim 19 recites:

> An intrusion detection and alerting system for a computer network comprising: a plurality of devices coupled to the computer network, each device adapted to at least one of: (1) sense data and provide the data to a data collection and processing center, and (2) be adjustable; and the data collection and process center comprising a computer with a firewall coupled to the computer network, the data collection and processing center monitoring data communicated to at least a portion of the plurality of devices coupled to the network, detecting an anomaly in the network using network-based intrusion detection techniques comprising analyzing data entering into a plurality of hosts, servers, and, computer sites in the networked computer system, determining which of the devices are anticipated to be affected by the anomaly by using pattern correlations across the plurality of hosts, servers, and computer sites, and alerting the devices.

Feldman Decl., Exh. P at 13:34-52. Similarly, Claim 26 recites:

> A data collection and processing center comprising a computer with a firewall coupled to a computer network, the data collection and processing center monitoring data communicated to the network, and detecting an anomaly in the network using network-based intrusion detection techniques comprising analyzing data entering into a plurality of hosts, servers, and computer sites in the networked computer system.

Feldman Decl., Exh. P at 14:18-25. As with the '409 Patent, I find that all of the claims in the '084 Patent "rise and fall together" and, therefore, need not be considered individually. *See Accenture Global Servs., GmbH*, 728 F.3d at 1341; *Content Extraction & Transmission LLC*, 2013 WL 3964909 at *5.

Feldman Decl., Exh. P at 12:19-33. "Network based intrusion detection techniques" are "techniques for detecting, by analyzing network communications, whether unauthorized computers have entered or are seeking to enter a network, or are conducting reconnaissance activities." Markman Order at 5. An "anomaly" is "an irregularity in the data." *Id.* at 5. "Alerting the devices" means "notifying the device, an associated firewall, or administrator." *Id.* at 5.

According to the '084 Patent application, prior art taught methods that monitored data from a single host location. *See* Feldman Decl., Exh. P at 4:64-67 ("Intrusion detection products and services presently available are directed to the analysis of a single customer's data to determine intrusion events, but lack the capability to perform broad-scope intrusion analysis/detection."). The claimed method purports to improve upon the prior art by analyzing data traffic directed at multiple hosts. *See* Feldman Decl., Exh. P at 5:45-51. First, the method calls for a "data collection and processing center" attached to a computer network to receive information from various network devices and monitors; second, by the use of "different types of algorithms," the data collection and processing center analyzes the data for broad patterns of suspicious activity; and, third, if any intrusions are detected, "appropriate alerts or notifications are transmitted to the pertinent administrators of the hosts on the network." Feldman Decl., Exh. P at 7:31-44; 8:66-9:8; 10:54-11:13; *see also* Markman Order at 5. As with the '694 Patent and the '409 Patent, neither the claim nor the description of the invention in the specifications limit the '084 Patent to any particular device or machine. *See* Feldman Decl., Exh. P at 12:19-14:57; 10:13-15 ("[E]mbodiments of the invention are not limited to any specific combination of hardware circuitry and software.").

II. STANDARD OF REVIEW

"The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a); *Celotex Corp. v. Catrett*, 477 U.S. 317, 322 (1986). A genuine issue of material fact exists "if the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). In ruling on a motion for summary judgment, the court must view all evidence in the light most favorable to the nonmoving party, *see Overton v. N.Y. State Div. of Military & Naval Affairs*, 373 F.3d 83, 89 (2d Cir. 2004), and must "resolve all ambiguities and draw all permissible factual inferences in favor of the party against whom summary judgment is sought," *Sec. Ins. Co. of Hartford v. Old Dominion Freight Line Inc.*, 391 F.3d 77, 83 (2d Cir. 2004).

III. APPLICABLE LAW

The determination whether a claim is drawn to patent-eligible subject matter is a "pure question of law." *Lumen View Tech. v. Findthebest.com, Inc.*, 984 F. Supp. 2d 189, 204 (S.D.N.Y. 2013). Patent-eligible subject matter is defined in section 101 of the Patent Act:

> 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 (2012). The relevant term is "process," for that is what each of these patents involve. "Process" is defined by the statute as a "process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material." *Id.* § 100(b). The Supreme Court long has upheld the patentability of processes:

> A process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing. If new and useful it is just as patentable as is a piece of machinery. In the language of the patent law, it is an art. The

> machinery pointed out as suitable to perform the process may or may not be new or patentable; whilst the process itself may be altogether new, and produce an entirely new result. The process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence.

Diamond v. Diehr, 450 U.S. 175, 183 (1982) (quoting *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1877)). However, "laws of nature, physical phenomena, and abstract ideas" are not patent-eligible subject matter under § 101. *Bilski v. Kappos*, 561 U.S. 593, 601 (2010). If they were, the "basic tools of scientific and technological work" would be preempted. *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972); *see also Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014). "[M]onopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it." *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012).

The Supreme Court also has cautioned against too broadly interpreting the exceptions to § 101 patentability. "[A]ll inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo*, 132 S. Ct. at 1293; *see also Alice*, 134 S. Ct. at 2354 ("[W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law."). Courts "must distinguish between patents that claim the building blocks of human ingenuity and those that integrate the building blocks into something more . . . thereby transforming them into a patent-eligible invention." *Alice*, 134 S. Ct. at 2354.

The Supreme Court recently reaffirmed the two-step inquiry courts are to use in drawing the distinction between patent-ineligible concepts, and patent-eligible applications of such concepts. First, a court must "determine whether the claims at issue are directed to one of those patent-ineligible concepts." *Alice*, 134 S. Ct. at 2355. If the answer is yes, the court proceeds to the second step, which asks whether "the elements of each claim both individually

and 'as an ordered combination' . . . 'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1298). The Supreme Court described the second step of the analysis as "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.'" *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 132 S. Ct. at 1294).

"To transform an unpatentable law of nature into a patent-eligible *application* of such a law, one must do more than simply state the law of nature while adding the words 'apply it.'" *Mayo*, 132 S. Ct. at 1294. Additional steps that "consist of well-understood, routine, conventional activity," which, "when viewed as a whole, add nothing significant beyond the sum of their parts" will not save an otherwise patent-ineligible claim. *Mayo*, 132 S. Ct. at 1298. Further, the "prohibition against patenting abstract ideas 'cannot be circumvented by attempting to limit the use of the formula to a particular technological environment' or adding 'insignificant postsolution activity.'" *Bilski*, 561 U.S. at 610-11. "Wholly generic computer implementation is not generally the sort of 'additional feature' that provides any 'practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.'" *Alice*, 134 S. Ct. at 2358.

The Federal Circuit Court of Appeals has acknowledged that the line between an abstract idea and a patent-eligible application may, at times, be difficult to draw. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1255 (Fed. Cir. 2014) ("Distinguishing between claims that recite a patent-eligible invention and claims that add too little to a patent-ineligible abstract concept can be difficult, as the line separating the two is not always clear."). This is particularly true with computer software patents. Courts must be careful not to mistake a

difficulty in conceptualizing an esoteric—but potentially patent-eligible—invention with a patent-ineligible abstraction. Indeed, in *Alice*, which involved software implementing the financial strategy of intermediated settlement of financial instruments, the Supreme Court expressly declined to provide any bright-line rule. *Alice*, 134 S. Ct. at 2357 ("In any event, we need not labor to delimit the precise contours of the 'abstract ideas' category in this case."); *see also Bilski*, 130 S. Ct. at 3232 (declining to "define further what constitutes a patentable 'process,' beyond pointing to the definition of that term provided in § 100(b)"). Nonetheless, in a line of cases stretching back over 40 years, the Supreme Court has provided several "guideposts" to which courts may look in determining what constitutes patent-ineligible subject matter.

The Supreme Court first addressed the patent-eligibility of processes involving computer software in *Gottschalk v. Benson*, 409 U.S. 63 (1972). In that case, the Supreme Court invalidated a patent claiming "a method of programming a general-purpose digital computer to convert signals from binary-coded decimal form into pure binary form." *Id.* at 65. While the method was applicable only to digital computers, the claims were not limited to a particular machine, technology, or purpose. *See id.* at 64. The Court concluded that the claim was "so abstract and sweeping as to cover both known and unknown uses of the [binary-coded decimal]," and that "the patent would wholly preempt the mathematical formula and in practical effect would be a patent on the algorithm itself." *Id.* at 72.

The Supreme Court explained that "[t]ransformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines." *Id.* at 70. However, the Court went on to make clear that the so-called "machine-or-transformation" test is not a requisite for patent eligibility, particularly with

respect to computer program patents. *Id.* at 71. The Supreme Court also made clear that it was not holding that a generally-applicable software program was unpatentable solely because it was not tied to a particular machine or failed to transform material into "a different state or thing." *Id.*

In *Parker v. Flook*, the Supreme Court invalidated another patent aimed at a non-patentable mathematical formula, but the use of which was limited to a narrow category of "post-solution" applications. *See* 437 U.S. 584 (1978). The patent in that case claimed a method for "updating" alarm limits for certain variables in the catalytic conversion process, such as temperature, pressure, and flow rate, during transient operating conditions. *See id.* at 585. The only novel step of the claimed process consisted of the application of a mathematical algorithm to calculate the updated limits. *See id.* at 585-86. The Court concluded that the patent claimed ineligible subject matter. In doing so, it rejected the argument that "the presence of specific 'post-solution' activity—the adjustment of the alarm limit to the figure computed according to the formula"—distinguished the case from *Benson* and made the process patent-eligible. *Id.* at 590.

Diamond v. Diehr, 490 U.S. 175 (1981), involved a patent for a process of curing synthetic rubber by constantly measuring temperature within a mold, feeding the measurements automatically into a computer, and then having the computer repeatedly recalculate cure times according to a recognized formula. Since, under *Benson* and *Flook*, mathematical formulas and computer algorithms alone could not be claimed for patent protection, the question presented was whether a claim for a rubber curing process that utilized such formulas and algorithms could be protected. The Supreme Court held that it could because the claims were focused, not on mathematical formulas, but on a process for curing rubber which, if performed as claimed, could

transform an article "into a different state or thing." *See id.* at 184. The claim of the patent did not purport to preempt others from using the formulas, but described "specific, concrete, and otherwise patentable subject matter" relating to curing rubber. *See id.* at 192. As the Supreme Court stated, "when a claim containing a mathematical formula implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect (*e.g.*, transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of § 101." *Id.* The Supreme Court made no rulings whether the statutory conditions of novelty or nonobviousness were satisfied. It ruled only on whether the claim of the patent was drawn to subject matter eligible for patent protection.

The Supreme Court has carried forward these holdings in more recent cases. In *Bilski v. Kappos*, for example, the patent claimed a process by which energy suppliers could apply statistical formulas via a computer program to hedge against market fluctuations. *See* 561 U.S. 593, 598 (2010). The Supreme Court held that the petitioners' attempt to patent "both the concept of hedging risk and the application of that concept to energy markets" was invalid. *Id.* at 609. The Court reasoned that the concept of hedging—a "fundamental economic practice long prevalent in our system"—was an unpatentable abstract idea, like the formulas in *Benson* and *Flook*, because it "would pre-empt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea." *Id.* at 612. The remaining claims simply tried to limit the application of the concept to the commodities markets and apply well-known statistical analysis, neither of which sufficed to transform the claims into patent-eligible subject matter.[6] *See id.*

[6] The Supreme Court also rejected the Federal Circuit's holding that the "machine-or-transformation" test is the exclusive test for § 101 analysis of process patents. *Id.* at 604 ("This Court's precedents establish that the machine-or-transformation test is a *useful and important clue*, an investigative tool, for determining whether some claimed inventions are processes under § 101."). The Court further explained that the invention of computer programs, in

Most recently, the Supreme Court invalidated a patent drawn to a process for mitigating settlement risk by effectuating trades through a third party intermediary, empowered to confirm the ability of both counterparties to honor their obligations before authorizing payments. *See Alice*, 134 S. Ct. at 2352. The specific method recited in the patent at issue in *Alice* consisted of the following steps:

> (1) "creating" shadow records for each counterparty to a transaction; (2) "obtaining" start-of-day balances based on the parties' real-world accounts at exchange institutions; (3) "adjusting" the shadow records as transactions are entered, allowing only those transactions for which the parties have sufficient resources; and (4) issuing irrevocable end-of-day instructions to the exchange institutions to carry out the permitted transactions.

Id. at 2359. Beginning with the first step of the above-described two-step analysis, determining if the claims at issue were directed to a patent-ineligible concept, the Supreme Court held that they were, stating, the "[method] claims are drawn to the abstract idea of intermediated settlement," "a fundamental economic practice long prevalent in our system of commerce," and "a building block of the modern economy." *Id.*, 134 S. Ct. at 2355-56.

Turning to the second step, whether the method claims included any additional features transforming the abstract idea into a patent-eligible application, the Supreme Court held that the patent failed that step as well. *See id.* at 2357. "[S]imply appending conventional steps, specified at a high level of generality, was not enough to supply an inventive concept," the Court held, and added that using a conventional computer to implement intermediated settlement did not satisfy step two. *Id.* at 2357-59 (citing *Benson*, 409 U.S. at 64 (holding that an algorithm implemented on a "general purpose digital computer" was unpatentable)). The patent involved,

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particular, required a more flexible test because previously "well-established principles of patent law probably would have prevented the issuance of a valid patent on almost any conceivable computer program." *Bilski*, 561 U.S. at 605. The Court similarly rejected the broad contention that the term "process" "categorically excludes business methods." *Bilski*, 561 U.S. at 607-09.

essentially, recordkeeping, adjustment of account balances, and the issuance of automated instructions—all "basic functions of a computer." *Id.* The Supreme Court concluded that the claims did not amount to patentable subject matter under 35 U.S.C. § 101.

IV. DISCUSSION

A. The '694 Patent

1. Step One of the *Mayo/Alice* Test

I hold that the '694 Patent claims a patent-ineligible abstraction for three reasons. First, the claim of the patent amounts to a mental process. The '694 Patent claims a method for filtering a "packet" of information based upon the contents of two or more packets. *See* Feldman Decl., Exh. H at 3:9-30. According to the claim, the method involves "selecting an access rule" according to the data contained in two or more packets, *i.e.*, who sent the packet and who is to receive it (the "header") as well as the message being sent (the "payload"). *See id.* The patent does not describe the nature of the rule, what in the header or payload determines the rule to be selected, how the rule determines who may access the packet and to what degree, or anything about the rule itself. A "firewall" is not a physical thing, but a metaphor connoting separation and impenetrability implemented by some undescribed mathematical formula. The "access control proxy" is but another metaphor, intended to suggest that the mathematical formula is grounded in some independent thing, working in some undefined fashion to determine what may pass to an intended recipient and what may not. There is nothing concrete to make the patent eligible for protection. *See, e.g.*, *Compression Techs. Solutions LLC v. EMC Corp.*, No. 12 Civ. 1746, 2013 WL 2368039 (N.D. Cal. May 29, 2013), *aff'd*, 557 F. App'x 1001 (Fed. Cir. 2014) (holding that software patent claiming method for "parsing similar information streams into identical packets" amounted to patent-ineligible mental process).

Intellectual Ventures argues that the claim is not a mental process because one would need a computer to decode the "packetized" information. *See* Opp'n Br. at 10-11. However, a computer does not convert a mental process into something concrete. *See Benson*, 409 U.S. at 67 (invalidating patent even though the "mathematical formula involved . . . has no substantial practical application except in connection with a digital computer"); *Cybersource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (holding that limitations to a particular computer readable medium are insufficient to save an otherwise patent-ineligible mental process); *Compression Techs. Solutions LLC*, 2013 WL 2368039, at *5 (holding patent to claim a mental process and rejecting argument that "if digital data is required, the human mind cannot utilize or comprehend it"); *see also Bancorp Servs. v. Sun Life Assurance Co. of Canada*, 687 F.3d 1266, 1277-78 (Fed. Cir. 2012) (noting the "interchangeability of certain mental processes and basic digital computation"). The mental nature of the '694 Patent is not cured by introducing computers to decipher packetized information and implement mathematical formulas.

Second, the claim is broad enough to raise concerns of preemption. *See Alice*, 134 S. Ct. at 2354 ("We have described the concern that drives this exclusionary principle as one of pre-emption."); *see also Benson*, 409 U.S. at 68 ("Here the 'process' claim is so abstract and sweeping as to cover both known and unknown uses . . . ."). The '694 Patent is not limited to a particular application but, rather, covers *all* network filtering by *any* firewall on *any* computer network where an access rule is chosen based upon the data of multiple packets. *See* Feldman Decl., Exh. H at 2:21-6:33; Markman Order at 11-12. Nor is it limited to a type of packetized information, a defined set of access rules, or particular devices. *See id.*, Exh. H at 2:21-6:33; Markman Order at 11-12. It is not an inventive application of an abstract idea but, rather, an

attempt to patent the abstract idea itself in nearly limitless embodiments. The Supreme Court has disapproved such attempts, noting that they "risk disproportionately tying up the use of the underlying [abstract ideas], inhibiting their use in making further discoveries." *Mayo*, 132 S. Ct. at 1294.

Intellectual Ventures argues that the "pre-emption concern" is "wholly absent" because, by referring to more than one packet, it improves upon prior art. Opp'n Br. at 8. Specifically, the "'694 patent distinguishes its claimed method from the filtering methods covered by the prior art," and "does not cover all methods of filtering computer network packets." Opp'n Br. at 8. But this is merely a claim of alleged novelty, which is an entirely separate and unrelated question than whether the claimed method amounts to an abstract idea. *See Diehr*, 450 U.S. at 190 ("The question therefore of whether a particular invention is novel is wholly apart from whether the invention falls into a category of statutory subject matter."). It is no less abstract to refer to two packets as it is to refer to one, and a new idea is equally capable of abstraction as an old one. Whether the '694 Patent claims a novel process or not, it broadly preempts every concrete application of the idea of choosing access rules based upon multiple sources of packetized information.

Finally, the patent fails the "machine-or-transformation" test. The test, although not dispositive, is a "useful and important clue" to subject matter eligibility. *See Bilski*, 561 U.S. at 604. The "machine-or-transformation" test provides that a claimed process is patent eligible if it "is tied to a particular machine or apparatus," or "transforms a particular article into a different state or thing." *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008). Claim 1 of the '694 Patent fails both prongs. The method is neither limited to a particular machine or apparatus, nor does it result in the transformation or creation of an article. *See* Feldman Decl., Exh. H. Rather, it

claims a process for filtering packages that is implementable by any "known firewall" within a generic computer network. *Id.*, Exh. H at 1:29-36; 4:12-23 (describing the processor required for implementation as a "a general purpose microprocessor" and a "network" as "any information systems network across which the information in the packet can be sent").

2. Step Two of the *Mayo/Alice* Test

The remaining elements of the '694 Patent, considered "both individually and as an ordered combination," fail to "transform" the abstract idea of the Patent "into a patent-eligible invention." *Alice*, 134 S. Ct. at 2354, 2357. When one looks beyond the abstract idea of selecting an access rule based upon multiple packet payloads, one is left with the steps of "receiving a packet having at least one header parameter and a payload" and "implementing the access rule for a packet." Feldman Decl., Exh. H at 6:34-44. The former step merely describes the "packetized" form of information conventionally sent to a firewall. *See id.*, Exh. H at 1:16-28. The latter step simply calls for "generic computer implementation" of the process. *See id.*, Exh. H at 3:56-4:40 (explaining that the method may be implemented by a "general purpose microprocessor" and "any means of storing digital information" such as "Random Access Memory (RAM), a hard disk, a floppy disk, an optical storage medium, or any combination thereof"). The '694 Patent fails to claim additional steps that provide any "practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself." *Alice*, 134 S. Ct. at 2358.

Relying heavily on the Federal Circuit's recent decision in *DDR Holdings, Inc. v. Hotels.com*, 773 F.3d 1245 (Fed. Cir. 2014), Intellectual Ventures argues that any method solving a problem peculiar to a technological context is patent-eligible. The '694 Patent, it argues, purports to solve the problem of fragmented malware hiding within multiple packets of

data. Because this problem is limited to computer networks and is not a pre-existing long-standing principle, Intellectual Ventures argues that the Patent is distinguishable from the patents invalidated in *Alice* and *Bilski*, and patent-eligible. Intellectual Ventures misreads both *DDR Holdings* and Supreme Court precedent.

In *DDR Holdings*, the Federal Circuit reviewed a patent that claimed a method for retaining website traffic after a website user clicked a third party merchant's link. *See* 773 F.3d at 1253. The Court described the claimed system as one that:

> 1) stores "visually perceptible elements" corresponding to numerous host websites in a database, with each of the host websites displaying at least one link associated with a product or service of a third-party merchant, 2) on activation of this link by a website visitor, automatically identifies the host, and 3) instructs an Internet web server of an "out-source provider" to construct and serve to the visitor a new, hybrid web page that merges content associated with the products of the third-party merchant with the stored "visually perceptible elements" from the identified host website.

Id. at 1257. In this way, the website owner would retain web traffic rather than lose it to a third party merchant's website. *See id.* at 1258. The Court noted that the claims recited neither a "mathematical algorithm" nor a "fundamental economic or longstanding commercial practice." *Id.* at 1257. While the patent claimed a "business practice," the Court distinguished it from prior cases, such as *Alice* and *Bilski*, which had invalidated patents claiming computer applications of conventional business practices:

> [T]hese claims stand apart because they do not merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet. Instead, the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks.

Furthermore, the Court held that the claims "do not attempt to preempt every application of the idea of increasing sales by making two web pages look the same." *Id.* Thus, the Federal Circuit held that the claims were drawn to patent-eligible subject matter under § 101.

The Federal Circuit in *DDR Holdings*, contrary to Intellectual Ventures' argument, did not hold that *all* claims to methods solving a problem "necessarily rooted in computer technology" constitute patent-eligible subject matter. In fact, the Court expressly rejected the argument as an excessively broad reading of its decision. *See id.* at 1258 ("We caution, however, that not all claims purporting to address Internet-centric challenges are eligible for patent."). The patent at issue in *DDR Holdings* was patent-eligible because it recited "a specific way to automate the creation of a composite web page," and thus was transformative. *Id.* at 1265. Nor does *DDR Holdings* stand for the proposition that "conventional" or "long prevalent" business practices are the only form of patent-ineligible abstract ideas. *See Benson*, 409 U.S. 63 (invalidating patent drawn to process for converting binary-coded decimal form to pure binary form); *Digitech Image Techs., LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014) (invalidating patent drawn to process for creating device profile within a digital image processing system that reduced distortion between captured and printed images).

DDR Holdings cannot elevate the patent-ineligible status of the '694 Patent. First, the '694 Patent fails to describe the claimed process at any level of specificity. The patent in *DDR Holdings*, in contrast, recited specific steps to accomplish the desired result of retaining website traffic. Pursuant to the claim language of the patent at issue there, a computer server was linked to source web pages containing links to third party merchant web pages. *See DDR Holdings*, 773 F.3d at 1249-50. When the link was activated, the computer server retrieved data associated with the source web page and generated and transmitted to a user's browser a new

composite web page. *See id.* By contrast, the '694 Patent broadly claims all processes by which a filtering decision is based upon two or more sources of information. It specifies neither *how* the information in the packets is processed nor *how* an access rule is selected or implemented; just that the information *is* processed and the access rule *is* implemented. *See* Feldman Decl., Exh. H at 6:34-44.

Second, the process at issue in *DDR Holdings* was patent-eligible because it resulted in a change in the standard structure of the internet and the creation of a new composite web page. *See Diehr*, 450 U.S. at 187-88 ("While a scientific truth, or mathematical expression of it, is not patentable invention, a novel and useful structure created with the aid of knowledge of scientific truth may be.") (quoting *Mackay Radio & Tel. Co. v. Radio Corp. of Am.* , 306 U.S. 86, 94 (1939)). The method recited by the '694 Patent, in contrast, fails to result in the creation of any novel structure or any corporeal, tangible, or visual element. *See* Feldman Decl., Exh. H at 6:34-44. Accordingly, I reject Intellectual Ventures' argument that *DDR Holdings* controls the outcome here.

The '694 Patent is more akin to the patent invalidated in *Digitech*. In that case, the Federal Circuit reviewed a patent reciting a method for improving digital image processing by adjusting both chromatic and spatial information to minimize distortion between a captured image and the printed image. *See* 758 F.3d at 1347-48. Prior art had adjusted only chromatic information. *See id.* The Federal Circuit concluded first that the "device" claims were not drawn to a "machine, manufacture, or composition of matter," 35 U.S.C. § 101, and were, therefore, patent-ineligible. *Id.* at 1349-50 ("Data in its ethereal, non-physical form is simply information that does not fall under any of the categories of eligible subject matter under section 101."). Second, the Court held that the "method" claim, while describing a process, was drawn to an

abstract idea "because it describes a process of organizing information through mathematical correlations and is not tied to a specific structure or machine." *Id.* at 1350. Furthermore, the claims amounted to an unpatentable "process that employs mathematical algorithms to manipulate existing information to generate additional information." *Id.* at 1351. Accordingly, the method claims were not patentable subject matter under 35 U.S.C. § 101. Similarly, the '694 Patent recites a process by which two or more data sets (rather than one) are analyzed to choose an appropriate (though unspecified) access rule. Also like the patent in *Digitech*, the '694 Patent's claim language fails to tie the process to any particular device.

Finally, Intellectual Ventures argues that "programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software." *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994). Thus, even if the '694 Patent is directed to a patent-ineligible abstract idea, the argument goes, it satisfies step two of the *Mayo/Alice* test because it requires general purpose computers to be programmed in a specific way. This argument fails because the '694 Patent fails to "tie the otherwise abstract idea to a specific way of doing something with a computer, or a specific computer for doing something." *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269, 1302 (Fed. Cir. 2013). The '694 Patent is not limited to a specific computer program or configuration. Rather, it broadly claims any network filtering program that bases the application of an access rule on two or more sources of packetized data. All software patents, whether drawn to an abstract idea or not, require implementation by way of a computer program. Intellectual Ventures' argument would result in the validation of *all* software patents, whether drawn to an abstract idea or not. This it cannot do. As the Supreme Court has held, if "a patent's recitation of a computer amounts to a mere instruction to

implement an abstract idea on a computer, that addition cannot impart patent eligibility." *Alice*, 134 S. Ct. at 2347. I hold that the '694 Patent is drawn to patent-ineligible subject matter under 35 U.S.C. § 101.

B. The '409 Patent

1. Step One of the *Mayo/Alice* Test

The '409 Patent is drawn to the idea of using rules to manage access to unencrypted portions of data after primary distribution. A review of representative Claim 1 reveals that there are three steps: (1) encrypting portions of data; (2) distributing the encrypted data; and (3) controlling access to decrypted portions of the distributed data by applying various, unspecified rules defining access rights. It is not disputed that the first two steps consist of routine, conventional activity. The third step is the purportedly novel aspect of the claimed process. However, the process of controlling access to decrypted portions of distributed data describes nothing more than an abstraction, completely lacking any corporeal application or particular function. Again, under Supreme Court and Federal Circuit precedent, the '409 Patent is drawn to patent-ineligible subject matter.

The concept of protecting access to otherwise unprotected digital information or property by the enforcement of rules is a conventional concept. Digital property has long been protected, and simply limiting the method to data that has been decrypted for use by a primary user does not make it any less abstract. *See Bilski*, 561 U.S. at 610-11 ("[T]he prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment.").

Furthermore, the claim language is so broad as to preempt any method for controlling post-distribution use of intellectual property. The claims are not limited to a

particular type of intellectual property. *See* Feldman Decl., Exh. O at 33:16-34:26 (discussing the patent's application to books, movies, software, documents, and map image data). Nor are they limited to a particular form of distribution. *See id.*, Exh. O at 15:10-24 ("[T]he packaged data . . . provided to the user may be provided and distributed in various ways, including but not limited to, via digital communications networks (for example, the Internet . . .), magnetic media (for example, tape or disk), CD-ROM, semiconductor memory modules (for example, flash memory . . .), and wireless (for example, broadcast)."). The claims apply to the application of *any* pre-selected access rule, *see id.*, Exh. O at 25:15-29:6 (discussing numerous ways in which the invention can control access to data depending upon the access rules selected, including "local display," printing, copying, modification, and transmission), executable on virtually *any* digital device including, but not limited to, televisions, computers, telephones, fax machines, and printers, *see id.*, Exh. O at 7:61-64; 10:32-39. Thus, the '409 Patent seeks to monopolize every concrete application of post-distribution access to intellectual property and validating such a patent "would tend to impede innovation rather than promote it, thereby thwarting the primary object of the patent laws." *Alice Corp.*, 134 S. Ct. at 2354-55 (internal quotations omitted).

Furthermore, like the '694 Patent, the '409 Patent fails both prongs of the "machine-or-transformation" test. It is explicitly applicable to any medium of intellectual property and executable on generic computer technology. *See* Feldman Decl., Exh. O at 33:16-34:26; 7:61-64; 10:32-39. Neither does the claimed process result in any tangible transformation of an article or thing—the method simply permits a user to access the property in a particular (though unspecified) way. *See id.*, Exh. O at 15:30-40 ("The access mechanism allows a user to access the data in packaged data according to the rules provided with (or separately from, as packaged rules) the packaged data and prevents the user or anyone else from accessing the data

other than as allowed by the rules."). While the execution of (unspecified) access rules may change the property itself in some (unspecified) way, *see, e.g.*, *id.*, Exh. O at 17:1-3 (noting that certain tamper detection rules will result in the destruction of data), the claim language is not limited to any particular tangible transformations, *see id.*, Exh. O at 35:33-40:47.

A recent Federal Circuit decision supports this conclusion. In *Ultramercial, Inc. v. Hulu, LLC*, the Federal Circuit rejected a patent "directed to a method for distributing copyrighted media products over the Internet where the consumer receives a copyrighted media product at no cost in exchange for viewing an advertisement, and the advertiser pays for the copyrighted content." 772 F.3d 709, 712 (Fed. Cir. 2014). Like the '409 Patent, the patent in *Ultramercial* sought to patent a method for distribution and control of digital data that lacked any "particular concrete or tangible form." *Id.* at 715. The patent holder in *Ultramercial* argued that the patent claims were not directed to the type of abstract idea invalidated by the *Alice* line of cases because they were not "routine," "long prevalent," or "conventional." *Id.* at 714. Rather, the patent holder argued, its patent required *users* to select the advertisement, which was a change from existing methods of passive advertisement. The Federal Circuit rejected that argument reasoning that, despite the purported advancement of the prior art, "the concept embodied by the majority of the limitations describes only the abstract idea of showing an advertisement before delivering free content" and had "no concrete or tangible form." *Id.* at 715; *see also Cloud Satchel, LLC v. Amazon.com, Inc.*, No. 13 Civ. 941, 2014 WL 7227942, at *7 (D. Del. Dec. 18, 2014) (invalidating a patent drawn to "the abstract idea of cataloguing documents to facilitate their retrieval from storage in the field of remote computing").

Here, Intellectual Ventures makes a similar argument that because the '409 Patent claims a process that was not taught by the prior art, it cannot be a "long-standing" or

"conventional" practice. *See* Opp'n Br. at 17-22. Thus, Intellectual Ventures concludes, it necessarily claims patent-eligible subject matter. *See id.* Intellectual Ventures' argument makes two errors. First, it conflates the question of novelty with the question of abstraction. Both the Supreme Court and Federal Circuit have repeatedly emphasized the independence of the inquiries. *See, e.g.*, *Diehr*, 450 U.S. at 190 ("The question therefore of whether a particular invention is novel is wholly apart from whether the invention falls into a category of statutory subject matter."); *Ultramercial*, 772 F.3d at 715 ("We do not agree with Ultramercial that the addition of merely novel or non-routine components to the claimed idea necessarily turns an abstraction into something concrete."). Second, patent-ineligible abstractions are not limited to "long-standing" or "conventional" practices. As addressed above, courts have invalidated patents under § 101 without first finding that they claimed "long-standing" or "conventional" practices. *See, e.g.*, *Benson*, 409 U.S. 63; *Digitech*, 758 F.3d 1344.

2. Step Two of the *Mayo/Alice* Test

The '409 Patent similarly fails to satisfy step two of the *Mayo/Alice* test. The additional features described in the claims consist of the following: encryption and decryption (Claims 2, 3, 4, 20, 21); descriptions of the data to be protected (Claim 5); descriptions of different examples of access rules (Claims 6, 7, 8, 9, 10, 11, 13, 14, 15, 18, 19, 23, 24); and descriptions of devices and systems in which the access mechanism may be located and by which access rules may be executed (Claims 16, 17, 18, 25, 26, 27, 29, 30, 32, 33, 36, 37, 39, 40, 42). These additional features fail to describe anything beyond "well-understood, routine, conventional activity." *Mayo*, 132 S. Ct. at 1298. Nor do they add anything nearing an "inventive concept." *Alice*, 134 S. Ct. at 2357. The use of an "access mechanism" to enforce the pre-selected rules is nothing more than programming conventional software or hardware to apply

rules governing access—a routine, conventional practice. *See* Markman Order at 8 (construing "access mechanism" as any "hardware and/or software for controlling access to data"). Thus, the claims call for the implementation of an abstract idea on generic computer technology, *see* Feldman Decl., Exh. O at 28:32-34 ("It is envisioned that a standard computer, equipped with an access mechanism will function as an authoring/distribution system."), and the additional features fail to transform the above-described abstract idea into patent-eligible subject matter. *See Alice*, 134 S. Ct. at 2360 (holding that claims requiring use of a "data processing system," "communications controller," and "data storage unit" did not offer "meaningful limitations beyond generally linking the use of the method to a particular technological environment, that is, implementation via computers."); *Ultramercial*, 772 F.3d at 715-16 (holding that the additional steps of "updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and the use of the Internet" were all "routine, conventional activity"). Accordingly, I hold that the '409 Patent is drawn to patent-ineligible subject matter under 35 U.S.C. § 101.[7]

C. The '084 Patent

1. Step One of the *Mayo/Alice* Test

I hold that the '084 Patent is drawn to the abstract idea of monitoring two or more computer sites for network-wide intrusions and alerting computer sites of potential threats. The

[7] As it did with respect to the '694 Patent, Intellectual Ventures argues that the '409 Patent claims a "specific way" of doing something with a computer (i.e., controlling access to decrypted data in accordance with pre-selected rules) and, therefore, amounts to more than the implementation of an abstract idea on a generic computer. See Opp'n Br. at 24-25 (citing *CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269, 1302 (Fed. Cir. 2013) ("The key to this inquiry is whether the claims tie the otherwise abstract idea to a specific way of doing something with a computer, or a specific computer for doing something; if so, they likely will be patent eligible, unlike claims directed to nothing more than the idea of doing that thing on a computer."). Again, this argument presumes, without demonstrating, that the '409 Patent claims a specific manner of controlling post-distribution access to decrypted data. It does not. Rather, it broadly claims all manners of doing so. Thus, the '409 Patent simply seeks to limit the abstract idea of controlling post-distribution access to digital property to "particular technological environment[s], which is insufficient to save a claim." *Ultramercial*, 772 F.3d at 716 (citing *Alice*, 134 S. Ct. at 2358).

claimed process consists of three primary steps: (1) detecting anomalies and intrusions in a computer network by analyzing network communications entering two or more computer sites; (2) using "pattern correlations" across the network devices to determine which devices are likely to be affected by the anomaly or intrusion; and (3) alerting any potentially affected devices. *See* Feldman Decl., Exh. P at 12:19-33. The preamble to Claim 1 limits the process to networks comprised of two or more devices, one of which contains a firewall. *See id.*, Exh. P at 12:19-22. Under Supreme Court and Federal Circuit precedents, the '084 Patent claims a patent-ineligible abstract idea.

The first step amounts to a mental process, even if aided by a computer to translate data or speed up calculations. *See Benson*, 409 U.S. at 67 (holding that "mental processes" are not patentable and invalidating patent claiming process for implementing mathematical formula on generic computer technology); *see also SiRF Tech., Inc. v. Int'l Trade Comm'n*, 601 F.3d 1319, 1333 (Fed. Cir. 2010) ("In order for the addition of a machine to impose a meaningful limit on the scope of a claim, it must play a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly, *i.e.*, through the utilization of a computer for performing calculations.").[8] The second step amounts to the use of a mathematical formula to identify patterns corresponding to network intrusions. Accordingly, the step is directed to data analysis and manipulation—processes also held to be patent-ineligible. *See, e.g.*, *Digitech*, 758 F.3d at 1350 ("The method in the #415 patent claims an abstract idea because it describes a process of organizing information through mathematical correlations and is not tied to a specific

[8] Intellectual Ventures appears to admit as much. *See* Opp'n Br. at 32 ("[I]f the data packets were printed out, and reviewed manually, and the algorithms broken down into steps such that a *human could review them*, it would take enormous manpower and time to even attempt to practice the patent by hand.") (emphasis added). The mere fact that manual review is not a *practical* implementation of the idea is irrelevant. That the method *could* be accomplished within a human mind is enough to demonstrate that the patent is drawn to an abstract idea.

structure or machine."). The third step—alerting vulnerable devices—is a conventional, routine practice incapable of transforming an otherwise patent-ineligible process into a patent-eligible application. *See Flook*, 437 U.S. at 590 ("The notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process exalts form over substance."). The preamble, which limits the process to computer networks containing two or more devices and at least one firewall, also fails to save the process. *See Mayo*, 132 S. Ct. at 1297 ("[T]he prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.") (internal quotations omitted).

Furthermore, the '084 Patent claim language is broad enough to raise serious preemption concerns. The claims are neither limited to a particular device nor even to a particular software program. The patent application makes this explicit:

> It should be understood that the inventive principles described in this application are not limited to the components or configurations described in this application. It should be understood that the principles, concepts, systems, and methods shown in this application may be practiced with software programs written in various ways, or different equipment than is described in this application without departing from the principles of the invention.

Feldman Decl., Exh. P at 12:5-12; *see also* Markman Order at 5 ("The patent does not cover what specific techniques are used to detect an intrusion."). This broad-reaching language confirms the general and abstract nature of the patent. *See Alice*, 134 S. Ct. 2354 ("[I]n applying the § 101 exceptions, we must distinguish between patents that claim the building blocks of human ingenuity and those that integrate the building blocks into something more."). Validating such a patent would impede, rather than promote, innovation because every concrete application

built upon the idea of monitoring multiple computer sites for network intrusion would be exposed to a claim for infringement. *See id.* at 2354-55.

2. Step Two of the *Mayo/Alice* Test

The remaining claim limitations of the Patent, considered individually and as an "ordered combination," lack an "inventive concept" and fail to transform the Patent's abstract ideas into a patent-eligible application. *Alice*, 134 S. Ct. at 2355. For example, Claim 3 provides for the adjustment of "the firewall of each of the devices that is anticipated to be affected by the anomaly." Feldman Decl., Exh. S at 12:39-42. Similarly, Claim 17 provides for "controlling the device that is anticipated to be affected by the anomaly." *Id.*, Exh. S at 13:29-30. These additional limitations fail to save the patent because they recite routine, conventional, "insignificant post-solution activity." *Bilski*, 561 U.S. at 611; *Flook*, 437 U.S. at 590. The remaining claims either repeat the method recited in Claim 1 in slightly more detail, *see, e.g.*, Feldman Decl., Exh. S at 12:48-49 (reciting "[t]he method of claim 5, wherein analyzing the data packets comprises analyzing data packets that have bene received at at least two of the plurality of devices"), or limit the method to implementation on generic computer technology, *see, e.g.*, *id.*, Exh. S at 14:18-25 (claiming a "data collection and processing center comprising a computer with a firewall coupled to a computer network"). As discussed above, these additional features are insufficient to transform the abstract idea into a patent-eligible application. *See Alice*, 134 S. Ct. at 2360 (holding that the recitation of a "handful of generic computer components configured to implement the [abstract] idea" insufficient to save an otherwise invalid patent).

In *Cybersource*, the Federal Circuit reviewed a method similar to that claimed by the '084 Patent. *See* 654 F.3d 1366. There, the patent recited a method for detecting fraudulent online credit card transactions. *See id.* at 1367. The prior art methods had analyzed billing

addresses and personal identification information to detect fraud. *See id.* The claimed method, by contrast, analyzed "internet address" information—such as IP addresses, MAC addresses, and email addresses—to determine if the information was consistent with past orders placed on the same credit card.[9] *See id.* at 1367-68. Like the '084 Patent, the patent in *Cybersource* was not limited to a particular formula or mathematical algorithm, but rather, "broadly purport[ed] to encompass *any* means of utilizing the map of credit card numbers to determine if the credit card transaction [was] valid." *Id.* at 1370. The Federal Circuit concluded that the claims failed to recite patent-eligible subject matter because each step could be "performed in the human mind, or by a human using a pen and paper." *Id.* at 1371-72. The Court reasoned that although some interaction with a computer may be required to retrieve information, "such data-gathering steps cannot alone confer patentability." *Id.* at 1372. Here, the '084 Patent similarly claims *any* means of analyzing data directed toward two or more computer sites to detect network intrusion and the practical necessity of some computer technology does not save the claims from abstraction. Accordingly, I hold that the '084 Patent, reciting no more than a mental process implemented on generic computer technology, is drawn to patent-ineligible subject matter under 35 U.S.C. § 101.[10]

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[9] Specifically, the representative claim recited:

> A method for verifying the validity of a credit card transaction over the Internet comprising the steps of: (a) obtaining information about other transactions that have utilized an Internet address that is identified with the [ ] credit card transaction; (b) constructing a map of credit card numbers based upon the other transactions and; (c) utilizing the map of credit card numbers to determine if the credit card transaction is valid.

Cybersource, 654 F.3d at 1370.

[10] Intellectual Ventures makes the same arguments with respect to the '084 Patent as it did with respect to the '694 Patent and the '409 Patent. First, it argues that because the '084 Patent provides a novel solution to a problem unique to a technological context it claims patent-eligible subject matter. *See* Opp'n Br. at 29-33. Second, because the patent calls for the programming of a computer in a "specific" way, it satisfies step two of the *Mayo/Alice* test even if it is drawn to an abstract idea. *See* Opp'n Br. at 33-39. For the reasons fully explained above, I reject these arguments. Like the '694 Patent and the '409 Patent, the '084 Patent is drawn to an unpatentable abstract idea and

V. CONCLUSION

For the foregoing reasons, JPMC's motion is GRANTED and Intellectual Ventures' claims with respect to the '694 Patent, the '084 Patent, and the '409 Patent (Counts 2, 3, and 4 of the Complaint, respectively) are dismissed. The Clerk shall mark the motion (Doc. No. 252) terminated. The parties shall appear for a status conference on May 19, 2015 at 10:30 a.m. to discuss the status of proceedings related to the remaining Counts of the Complaint: Count 1, relating to Patent No. 5,745,574, and Count 5, relating to Patent No. 7,634,666.

SO ORDERED.

Dated: New York, New York
April 28, 2015

ALVIN K. HELLERSTEIN
United States District Judge

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the additional claim features fail to add any "inventive concept" sufficient to transform it into a patent-eligible application. *Alice*, 134 S. Ct. at 2357.