IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

CARD VERIFICATION SOLUTIONS, LLC,	)	
Plaintiff,	)	
v.	)	13 C 6339
CITIGROUP INC.,	)	Judge Virginia M. Kendall
Defendant.	)	

MEMORANDUM OPINION AND ORDER

Plaintiff Card Verification Solutions, LLC filed a patent infringement action pursuant to 35 U.S.C. § 271 against Defendant Citigroup Inc., alleging that Citigroup infringed United States Patent No. 5,826,245 ("the '245 Patent"). Specifically, Card Verification claims that Citigroup infringed its patented method for providing verification information for a transaction between an initiating party (e.g., a consumer) and a verification-seeking party (e.g., a merchant). Citigroup maintains that the '245 Patent is invalid and now moves to dismiss the Complaint under Fed. R. Civ. P. 12(b)(6) for failure to state a claim. Citigroup argues that the '245 Patent claims an abstract concept and therefore does not contain patentable subject matter required by 35 U.S.C. § 101. For the following reasons, Citigroup's Motion to Dismiss is denied.

BACKGROUND

The '245 Patent claims an invention for providing verification information for a transaction securely. Specifically, the '245 Patent discloses methods for passing confidential information over an unsecured network with reduced risk of it being captured by an untrusted

party. (Dkt 1-1, '245 Patent, 1:34-36). The six independent claims of the '245 Patent are claims 1, 20, 21, 22, 23, and 24. Claim 1 is representative of the independent claims:

> 1. A method for giving verification information for a transaction between an initiating party and a verification-seeking party, the verification information being given by a third, verifying party, based on confidential information in the possession of the initiating party, the method comprising:
>
> on behalf of the initiating party, generating first and second tokens each of which represents some but not all of the confidential information,
>
> sending the first token electronically via a nonsecure communication network from the initiating party to the verification-seeking party,
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> sending the second token electronically via a nonsecure communication network from the initiating party to the verifying party,
>
> sending the first token electronically via a nonsecure communication network from the verification-seeking party to the verifying party,
>
> verifying the confidential information at the verifying party based on the first and second tokens, and sending the verification information electronically via a nonsecure communication network from the verifying party to the verification-seeking party.

('245 Patent, 4:15-37). Dependent claims 4 through 6 require the addition of randomly generated, identical tags to the first and second pieces of the confidential information. (*Id.*, 4:45-53). The addition of the tags completes the creation of the tokens. The verifying party proceeds to authenticate the transaction by associating the first and second tokens with each other based on the identical tags added to each token. (*Id.*, 4:54-60).

The tags are four-digit pseudorandom strings of numbers and characters. The same tag is added to both pieces of the confidential information (e.g, a credit card number), the tag being attached to the end of one piece and to the beginning of the other piece. This attachment procedure allows the verifying party to recognize which piece comes first in reconstructing the confidential information. (*Id.*, 2:60-67). The '245 Patent states that use of a pseudorandom tag

reduces the chance that someone monitoring the output of the device (e.g., a computer) for the purpose of attempting to steal the confidential information will be able to predict what tag will be used. (*Id.*, 3:5-8). Using the claimed process prevents the verification-seeking party from ever receiving the entirety of the confidential information, instead only receiving a tagged piece and an approval code. The confidential information is never available as a whole except at the initiating party's computer and at the verifying party's portal. (*Id.*, 4:1-6).

The differences between the six independent claims are not material for the purpose of this opinion; but because Card Verification explicitly asserts claim 22 in its Complaint, the Court additionally identifies independent claim 22:

> 22. A method for use in relation to providing verification information for a transaction between an initiating party and a verification-seeking party, the verification information being given by a third, verifying party, based on confidential information in the possession of the initiating party, the method comprising:
>
> on behalf of the initiating party, generating first and second tokens each of which represents some but not all of the confidential information,
>
> on behalf of the initiating party, sending the first and second tokens electronically via a nonsecure communication network,
>
> collecting the first and second tokens at the verifying party,
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> verifying the confidential information at the verifying party based on comparing the first and second tokens, and
>
> sending the verification information electronically via a nonsecure communication network from the verifying party to the verification-seeking party.

('245 Patent, 6:9-28).

LEGAL STANDARD

Rule 12(b)(6) requires dismissal of complaints that fail to state a claim upon which relief can be granted. Fed. R. Civ. P. 12(b)(6). When considering a motion to dismiss pursuant to Rule

12(b)(6), the court construes the complaint "in the light most favorable to the nonmoving party, accept[s] well-pleaded facts as true, and draw[s] all inferences in [the plaintiff's] favor." *Reynolds v. CB Sports Bar, Inc.*, 623 F.3d 1143, 1146 (7th Cir. 2010). To survive a motion to dismiss, the plaintiff must do more than simply recite elements of a claim; the "complaint must contain sufficient factual matter, accepted as true, to 'state a claim to relief that is plausible on its face.' " *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 570 (2007)). Although it is proper for a court to consider the invalidity of a patent for ineligibility at the motion to dismiss stage, it is nevertheless "rare that a patent infringement suit can be dismissed at the pleading stage for lack of patentable subject matter … because every issued patent is presumed to have been issued properly, absent clear and convincing evidence to the contrary." *Ultramerical, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1338-39 (Fed. Cir. 2013) (*vacated on other grounds by Wildtangent, Inc. v. Ultramerical, LLC*, 134 S. Ct. 2870 (2014)). Thus, dismissal is appropriate solely when the only plausible reading of the patent is that there is clear and convincing evidence of ineligibility. *Id.* at 1339.

DISCUSSION

Citigroup contends that the '245 Patent is invalid because it is directed to patent-ineligible subject matter—specifically an abstract idea. Citigroup argues that the claims do not recite the application of an abstract idea in a concrete setting, but instead merely recite an idea that can be performed as a mental process. In particular, Citigroup contends that the claimed method is invalid because the method (1) can be performed by a human using pen and paper; (2) is not tied to a particular machine or apparatus; and (3) does not require or result in the transformation of one article into another. However, because the '245 Patent plausibly sets forth a process instituting the application of an abstract idea, Citigroup's Motion to Dismiss is denied.

An inventor may obtain a patent for "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." 35 U.S.C. § 101. Section 101 impliedly bars patents on " '[l]aws of nature, natural phenomena, and abstract ideas' ". *Alice Corp. Pty. Ltd. V. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014) (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc*,, 133 S. Ct. 2107, 2116 (2013); *see also Mayo Collaborative Servs. V. Prometheus Labs., Inc*,, 132 S. Ct. 1289, 1293 (2012). The Supreme Court has explained that " '[a] principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.' " *Bilski v. Kappos*, 561 U.S. 593, 130 S. Ct. 3218, 3230 (2010) (alteration in original) (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) (internal quotation marks omitted)); *see also Mayo*, 132 S. Ct. at 1301 (" 'the basic tools of scientific and technological work' " are not patentable) (quoting *Benson*, 409 U.S. at 67).

A fine line must be walked in excluding patents that "pre-empt the use of an approach" that lead to "a monopoly over an abstract idea," while also recognizing that "all inventions … embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *See Alice*, 134 S. Ct. at 2354 (internal citations and quotation marks omitted). Accordingly, an invention is not rendered ineligible for patent merely because it involves an abstract concept. *Id.*; *see also Diamond v. Diehr*, 450 U.S. 175, 187 (1981). "[A]pplication[s]" of such concepts " 'to a new and useful end,' " remain eligible for patent protection. *Benson*, 409 U.S. at 67. In applying the § 101 exception, 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. *See Mayo*, 132 S. Ct. at 1294, 1303. The Supreme Court has set forth a two-step framework for distinguishing patents that claim laws of

nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, courts must "determine whether the claims at issue are directed to one of those [patent-ineligible] concepts." *Alice*, 134 S. Ct. at 2355. If so, courts proceed to consider the elements of the claims "to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Id*; *Mayo*, 132 S. Ct at 1297.

A. The '245 Patent is Directed Towards an Abstract Idea

The first step requires this Court to determine whether the claims at issue are directed toward a patent-ineligible concept, specifically, an abstract idea. They are. The claims recited in the '245 Patent are drawn to the abstract idea of verifying a transaction.

Patents that merely claim well-established, fundamental concepts fall within the category of abstract ideas. *Cyberfone Sys., LLC v. CNN Interactive Grp., Inc.*, 558 Fed. A'ppx 988, 991 (Fed. Cir. 2014). Both the Supreme Court and the Federal Circuit have rejected attempts to patent basic financial and economic concepts. *See Bilski*, 130 S. Ct. at 3231 (holding that risk hedging is a "fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class"); *Fort Props., Inc. v. Am. Master Lease LLC*, 671 F.3d 1317, 1318, 1322-23 (Fed. Cir. 2012) (enabling tax-free property exchanges); *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Canada (U.S.)*, 687 F.3d 1266, 1277 (Fed. Cir. 2012); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1330-34 (Fed. Cir. 2012) (applying for credit); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1367-68, 1376-77 (Fed. Cir. 2011) (method for detecting fraud in credit card transactions, including simple strategies that can be performed mentally, without the aid of a machine); *In re Comiskey*, 554 F.3d 967, 970-71, 981 (Fed. Cir. 2009) (conducting arbitration); *In re Schrader*, 22 F.3d 290, 291, 293-94 (Fed Cir. 1994) (bidding at an auction).

It follows from these cases, and *CyberSource* in particular, that the claims within the '245 Patent are directed to an abstract idea. The very title of the '245 Patent is "Providing Verification Information for a Transaction." Card Verification's claims involve a method of passing along confidential information through a trusted, third-party intermediary to ensure both that a consumer can complete the transaction and that the necessary confidential information remains secure. On their face, the claims are drawn to the concept of verifying transaction information, and like the risk hedging in *Bilski* or verification of similar information in *CyberSource*, the concept of transaction verification is "a fundamental economic practice long prevalent in our system of commerce." *See Bilski*, 130 S. Ct. at 3231. Even when looking at the patent in the light most favorable to Card Verification, it is directed toward a patent-ineligible abstract idea.

B. The Additional Elements of the '245 Patent Plausibly Transform the Nature of the Claims Into a Patent-Eligible Application

Finding the abstract idea itself to be ineligible subject matter is not the end of the inquiry. *See Mayo*, 132 S. Ct. at 1297 ("[D]o the patent claims add *enough* … to allow the processes they describe to qualify as patent-eligible processes that *apply* natural laws?"). The second step in the § 101 analysis requires determining whether "additional substantive limitations … narrow, confine, or otherwise tie down the claim so that, in practical terms, it does not cover the full abstract idea itself." *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1341 (Fed. Cir. 2013) (internal citations and quotation marks omitted).

Citigroup argues that the '245 Patent is not patent eligible because it is merely a "mental process" that can be performed by humans. Citigroup additionally contends that the claims do not expressly require the use of a computer or any other specific machine because the patent says that "the technique could be used in a wide range of applications to protect confidential

information." ('245 Patent, 4:8-10). Citigroup states that the entirety of the process can be performed with pen and paper.

The '245 Patent is device agnostic, as the claims are silent regarding machinery. However, a review of the diagrams demonstrates incorporation of a computer, nonsecure network, and pseudorandom tag generating software. A plausible interpretation of the patent is that computing devices, software, keyboards, and credit card readers would be required to use the invention. To invalidate the '245 Patent on the ground that it does not expressly require the use of a computer in its claims would be to adopt an "overly formalistic approach[] to subject-matter eligibility." *See CLS Bank Int'l v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269, 1281 (Fed. Cir. 2013).

Although simply implementing an abstract idea on a computer is not a patentable application of the idea, *see Alice*, 134 S. Ct. at 2357, a plausibly narrowing limitation is that of required pseudorandom tag generating software. The question whether a pseudorandom number and character generator can be devised that relies on an algorithm that can be performed by a human with nothing more than pen and paper poses a factual question inappropriate at the motion to dismiss stage. Without discovery on the issue, the Court is bound to make all reasonable inferences in favor of Card Verification. Here, an entirely plausible interpretation of the claims include a limitation requiring pseudorandom tag generating software that could not be done with pen and paper. Accordingly, Card Verification has plausibly alleged a method that does not comprise a "mental process."

Citigroup additionally contends that the '245 Patent cannot survive the "machine or transformation" test. Although the Supreme Court rejected exclusive reliance on the test as unduly rigid for measuring compliance with § 101, the test is nevertheless a "useful and

important clue" to patentability. *See Bilski*, 130 S. Ct. at 3227. Under the test, a 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." *SiRF Tech. v. Int'l Trade Comm'n*, 601 F.3d 1319, 1332 (Fed. Cir. 2010) (internal quotations omitted). For "a machine to impose a meaningful limit … it must play a significant part in permitting the claimed method to be performed." *Id.* at 1333. By contrast, "simply implementing an abstract concept on a computer, without meaningful limitations to that concept, does not transform a patent-ineligible claim into a patent-eligible one." *Accenture*, 728 F.3d at 1345.

Even under a liberal reading of the '245 Patent, the claims are not tied to a particular machine. The claims are entirely silent on the use of any physical apparatus, and although the diagrams display use of computers and software, the claims universally fail to specify how the computers are "specially programmed to perform the steps claimed in the patent" and therefore claims nothing more than a general purpose computer. *Dealertrack*, 674 F.3d at 1333.

But the claims may be sufficiently limited by the plausible transformation that occurs when the randomly-generated tag is added to the piece of confidential information. Typically, transforming data from one form to another does not qualify as the kind of transformation regarded as an important indicator of patent eligibility. *See CyberSource*, 654 F.3d at 1375 ("[T]he mere manipulation or reorganization of data … does not satisfy the transformation prong."). But here, the claimed invention goes beyond manipulating, reorganizing, or collecting data by actually adding a new subset of numbers or characters to the data, thereby fundamentally altering the original confidential information. *Contra id.* at 1372 (process of constructing "map" of credit card numbers was no different than writing down a list of numbers and compiling information).

The use of a credit card number provides an illustrative example. Once the computer in the process splits up the credit card number into two separate pieces, randomly generated tags are added to the two pieces. The addition of the tag transforms what was once a credit card number into an identifier for use by the verifying party. The verifying party then matches up the two pieces of the information solely because the randomly-generated tag is affixed to both. At least one of the objects of the '245 Patent process is to transform data from one form into another "that will be recognized by the intended recipient but secure against decryption by unintended recipients." *See, e.g.*, *TQP Dev., LLC v. Intuit, Inc.*, No. 2:12 CV 180 WCB, 2014 WL 651935, at *5 (E.D. Tex. Feb. 19, 2014). The claim requiring the addition of the tags plausibly does just that. The patent not only recites a process for verifying transaction information, it also involves a protocol for making the communication system itself more secure. ('245 Patent, 2:14-20). Therefore, even though the method does not result in the physical transformation of matter, *see Diehr*, 450 U.S. 175, it utilizes a system for modifying data that may have a concrete effect in the field of electronic communications. Accordingly, when viewing the patent in the light most favorable to Card Verification, it plausibly recites a patent-eligible application of the abstract idea of verifying a transaction. Citigroup's Motion to Dismiss is therefore denied without prejudice. Citigroup is free to challenge the validity of the '245 Patent after discovery and claim construction are completed in this case.

CONCLUSION

For the reasons stated herein, Citigroup's Motion to Dismiss is denied.

Virginia M. Kendall
United States District Court Judge
Northern District of Illinois

Date: September 29, 2014