IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

RMAIL, LIMITED	)	
	)	
v.	)	No. 2:10-cv-00258-JRG
	)	
AMAZON.COM, INC. a Delaware corporation, PAYPAL, a Delaware Corporation, and SOCIETY FOR WORLDWIDE INTERBANK FINANCIAL TELECOMMUNICATION SCRL D/B/A SWIFT, a Belgian limited liability cooperative company	)	JURY TRIAL DEMANDED

PLAINTIFF RMAIL, LIMITED'S OPPOSITION TO DEFENDANT PAYPAL, INC.'S MOTION FOR PARTIAL SUMMARY JUDGMENT OF INVALIDITY UNDER 35 U.S.C. SECTION 101

Dated: May 18, 2012

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I. INTRODUCTION

Defendants contend that most of the claims of the patents-in-suit do not even deserve consideration for patentability under the standards of Sections 102, 103 and 112 of the Patent Act. They seek a threshold finding of invalidity under Section 101. Defendants do so by recharacterizing and denigrating the inventive accomplishments of the Feldbaus, the inventors of the patents-in-suit. Under Defendants' theory, all that the inventors did was to "input[] certain data into mathematical algorithms for use in a certain business field." (Br. 7). That argument is more than ironic. At a high level of generalization, Amazon.com and Paypal as well simply "input certain data into mathematical algorithms for use in a certain business field," but Defendants run profitable technology businesses, and receive patents from the USPTO all the time.

Defendants carefully tailor their rhetoric believing they have defined an arbitrary level of generalization to describe the patents-in-suit in a way that matches the level of generalization of ineligible claims described in certain Supreme Court cases. In particular, Defendants' invalidity theory requires this Court to find that the '219 and '334 patents simply collect "data already conventionally collected (a delivery report) by using mathematical algorithms that were already used to generate and 'secure' such data for the same authentication purpose." (Br. 8). Putting aside that the term "delivery report" does not appear in any of the independent claims, Defendants' rationale seems more of an obviousness attack under Section 103, not a patent-eligible subject matter inquiry under Section 101. But if the combination of steps as a whole were so conventional, why did

the USPTO just issue a Notice of Intent to Issue Reexamination Certificate on May 1, 2012, over the very same prior art Defendants have asserted here? (Ex. A[1]).

Defendants' analysis incorrectly characterizes the disclosed inventions, inadequately addresses important claim limitations, and misapplies the law. As discussed below, Defendants ignore numerous factors that bring the patents-in-suit squarely into the category of subject matter deserving of consideration for patentability. They also forfeit all claim construction analysis and contend, contrary to relevant authority, that claim construction is not needed. Under the proper analysis, this Court should find that the claims recite a practical application of message authentication technology, and pass the case forward to the next stage – infringement, damages, and (if Defendants continue to press on despite their failed reexamination attempt) Section 102/103/112 patentability.

Finally, Rmail explains in Section VI that Section 101 is not properly a litigation defense at all. Courts that have enabled its use as a defense have acted under a misimpression of statutory law. Congress has not allowed it. Courts until now have ignored this Congressional will. This Court now has the power to correct a whopping misunderstanding of statutory law. Rmail encourages the Court to consider closely Section VI, to take up Rmail's arguments for the extension and modification (actually, the correction) of existing caselaw. If the Court agrees with Rmail, that will eliminate any need ever again for this Court (or any court) to enter into what has been called the "murky morass" of patent subject matter eligibility.

[1] All cited exhibits are to the Declaration of Robert Greenspoon in Support of Rmail's Opposition to Paypal's Section 101 Summary Judgment Motion.

II. THE DISCLOSED INVENTIONS, AS DISTINCT FROM THE CLAIMED INVENTIONS

The Feldbaus did not simply claim the age-old idea that a third party can create information to verify the dispatch of a message. Instead, they claimed a particular method for authenticating the dispatch of a message *and* its contents. All of the asserted claims rely on electronic means to do so, acting on digital representations of information that must include more than just the content of a message. The USPTO recently confirmed in reexamination that such claims, as a whole, are neither anticipated nor rendered obvious by the prior art, and thus as a whole do not address anything "conventional."[2]

Significant use of electronic means, like here, by itself crosses the threshold. *SiRF Technology, Inc. v. U.S. Int'l Trade Comm'n*, 601 F.3d 1319, 1332 (Fed. Cir. 2010). But on top of that, a second factor independently confirms patent eligibility. The use of mathematical associations or mathematical functions in the claims plays the identical role that the use of the Arrhenius equation did in *Diamond v. Diehr*, as recently and cogently explained in *Prometheus*. All of the other steps besides the mathematics, combined, "added to the formula something that in terms of patent law's objectives had significance – they transformed the process into an inventive application of the formula." *Mayo*

[2] Rmail agrees with Defendants that the USPTO does not evaluate Section 101 issues during reexamination, but it does address alleged "conventionality" of process claims through its prior art analysis. Furthermore, as Rmail explained in its opposition to Defendants' stay motion, the amendments to the '219 patent insert text to conform the words of the claims to the scope they already possessed. (Dkt. 97). This allowed the USPTO to align its views on what is the "broadest reasonable construction" with the views of a U.S. District Court on how the claims should be construed. Indeed, if Defendants believed reexamination amendments were narrowing in any way, they would have brought their motion based on the text of the claims as-amended (which they did not).

Collaborative Services, DBA Mayo Medical Labs. v. Prometheus Labs., 132 S. Ct. 1289, 1299 (2012) (discussing *Diamond v. Diehr*, 450 U.S. 175, 187 (1981)). Here, in addition to reciting significant electronic means, the claims recite an "inventive application of the formula."

A. The Claims are Narrower than the Disclosure, and Recite Electronic Means

Defendants' motion is based on the incorrect assumption that all of the asserted claims cover non-electronic and electronic processes just because the written description describes non-electronic and electronic processes as disclosed "inventions." For instance, Defendants sarcastically characterize the scope of claim 60 of the '219 patent: "It does not require a particular machine to perform any of these positively recited steps of the claim. . . . It could be an antique encryption device from World War II. It could be a mathematician at the CIA. It could be an extraterrestrial." (Br. 11-12). Defendants need not feign so much concern for antique collectors, spies and otherworldly creatures. The '219 and '334 patents do not claim that broadly, and do not claim as broadly as they disclose. "An inventor is entitled to claim in a patent what he has invented, but no more. He can, however, claim less, to avoid prior art or for any other reason. Therefore, in construing a claim there are two limiting factors – what was invented, and what exactly was claimed." *Myspace, Inc. v. Graphon Corp.*, 672 F.3d 1250, 1256 (Fed. Cir. 2012). That is what happened here during prosecution, when the inventors narrowed their claims to connote solely digital electronic means for message handling and authentication. Defendants do not even try to argue that such claims, so limited, fail to cross the eligibility threshold. Any ruling by the Court that such claims fail the Section 101 threshold would call into question hundreds of thousands of telecommunication and

cryptography patents, not to mention every patent covering every Amazon.com or Paypal in-house innovation.

In a patent case, the most "significant source of the legally operative meaning of disputed claim language" is the intrinsic evidence of record, that is, the claims, the specification and the prosecution history. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). This is because "the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). In some cases, the specification may reveal a "special meaning" given by the inventor that differs from the meaning the term might otherwise possess. *Id.* at 1316; *see also Irdeto Access, Inc. v. Echostar Satellite Corp.*, 383 F.3d 1295, 1300 (Fed. Cir. 2004) (holding that where a disputed claim term has "no previous meaning to those of ordinary skill in the art, its meaning, then, must be found elsewhere in the patent."). The specification may be used to interpret what the patent holder meant by a word or phrase in the claim. *E. I. Du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433 (Fed. Cir. 1988); *Alcatel USA, Inc. v. Tekelec, Inc.*, 2002 U.S. Dist. LEXIS 28608, at *8-*9 (E.D. Tex. Mar. 5, 2002) (finding meaning of a "coined term" having "no previous meaning to those of ordinary skill in the art" by seeking guidance from the specification, even though there was no explicit definition). Applying these interpretational mandates confirms that the claims are limited to electronic means acting on digital representations – something well beyond human pencil-and-paper capacities.

1. The Disclosed (As Opposed to Claimed) Invention Included Non-Electronic and Electronic Versions

Defendants single out several statements from column 4 of the written description that signal breadth of the disclosed invention. (Br. 10). Again, a "disclosed" invention may be broader than a "claimed" one. *Myspace*, 672 F.3d at 1256. These excerpts, part of the original patent specification on filing, do indeed state the invention encompasses "all types of information" being dispatched, and "all types of methods and apparatuses" that might perform the recited steps. (Ex. B, '219 Patent at 4:3-22). It should not be surprising that the specification – at least upon filing – discussed such breadth, even though some of it was later disclaimed during the USPTO amendment process.

The '219 patent DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS divides roughly into three sections. The patent first discusses a non-electronic embodiment of the inventive method, starting at 4:66 and continuing to 6:30, and discussing Figure 1. This first section of the DETAILED DESCRIPTION discusses "paper documents being sent non-electronically," such as through "a courier service or the registered mail service of the post office." (5:1-4). Figure 1 even includes human figures and sealed envelopes. Notably, this non-electronic embodiment of the patent does not use the word "authenticator" in any way. This non-electronic embodiment gave special tasks to a "clerk 20" (5:29) who was a "non-interested third party" (6:7-8). Such a clerk was required to combine a dispatch sheet with a copy of a transmitted document itself, and keep both items in a secure location, placed into an envelope with the service's seal (5:29-57). The dispatch sheet included the date and time of the dispatch or delivery

and the destination address (5:5-14). The Feldbaus believed this embodiment was inventive, but it was not the only one.[3]

Starting at 6:31 and continuing through 9:40, the DETAILED DESCRIPTION explains a thoroughly electronic version of a related inventive method. This version makes use of "authenticator 70," a special purpose device that is "constructed and operated" (6:32). Such device is "part of a system for transmitting information, whether by facsimile machine, modem, computer, network or E-mail stations, and any combinations thereof, or by other electronic means" (6:34-37). While the authenticator is discussed with some breadth, its breadth is constrained by two things: (1) there is no "authenticator" in use within the human-only embodiment, and (2) the "authenticator" is part of a system whose broadest textual characterization is "electronic means," a term that would not reach living and breathing couriers, letter carriers, antiques enthusiasts, spies or extraterrestrials. Most of the rest of this second section of the DETAILED DESCRIPTION describes the parts and pieces of the electronic device that makes up the "authenticator," including the remarkable fact that an embodiment of it "can be enclosed within a . . . box" (8:36-40).

Starting at 9:41 and continuing through the end of the DETAILED DESCRIPTION section at 19:11, the '219 patent describes a more intricate electronic embodiment, still using a device denominated as the "authenticator." This is the first part of the DETAILED DESCRIPTION to address the use of mathematical associations or

[3] Even though eventually disclaimed, even this human-conducted embodiment would pass the "machine or transformation" test, since it transforms and associates pieces of paper for a highly valuable practical application. The existence alone of such records, waiting in secure storage, provides value to the participants by deterring baseless disputes over a courier dispatch. As discussed in the following sections, the human-conducted embodiment was disclaimed, and thus will never be "preempted."

functions in conjunction with the authenticator. The inventors even defined the term "mathematical association:"

> An efficient method for associating a plurality of information elements is by associating a digital representation thereof using a method referred to herein as "mathematical association". A digital representation of an information element can be considered as a number, for example as the element's standard binary, hexadecimal or other base representation. Using mathematical association, rather than maintaining the information elements (numbers) themselves, it is sufficient to maintain the results (also numbers) of one or more functions which are applied to one or more of these information elements. (These results are sometimes referred to as "message-digests", "hash-values" or "digital-signatures"). More formally, if A is a set of information elements, and F is the mathematical association function, then the set B of information elements is obtained as the result of applying the function F to the set A of information elements, i.e. B=F(A).

(10:13-29). Thus, the inventors defined the term "mathematical association" to import a "digital" concept, *i.e.*, to denote an association of a digital representation of an information element, not necessarily the element itself. Examples given are message-digests, hash-values and digital-signatures – concepts that might predate the invention (like the Arrhenius equation) but that reside squarely in the world of digital processing within an electronic device. This section of the DETAILED DESCRIPTION then goes on to address more and more intricate systems that use electronic means (the "authenticator") to conduct digital operations (the "mathematical association"). For example, this section also includes a complete discussion of the state of the art in cryptography and digital signatures.[4] (11:52-15:42). This section also explains that one

[4] This section also confirms that applying a function F_i to a subset S_i of a set A having elements $a_1, \ldots, a_n$ to generate a result B with elements $b_1, \ldots, b_m$, is itself "mathematical association" (12:1-14, all this "considered to be mathematically associated"), and thus invokes the "digital" denotation of the defined term "mathematical association."

example "function executor" within the "authenticator" may be a Microchip Technology Inc. PIC16C5x series EPROM-based micro-controller. (13:19-22).

Finally, tightly marrying the DETAILED DESCRIPTION with the ultimately-issuing claims, this last section discusses the ultimate culmination of all of the above: a detailed, intricate message authentication system that (a) uses an "authenticator;" (b) uses "mathematical association," including many alternative exemplary cryptographic functions; and (c) uses inputs to the various functions that in combination, as confirmed by the USPTO, are not suggested as "conventional" by any prior art. (15:43-17:14). For example, this culmination of all preceding embodiments uses a very specific time stamp within the overall process. The time of dispatch – element a_2 – is securely generated by the authenticator acting as a non-interested third party, and is the time such electronic device relays the message outbound toward the receiving party's device. (16:3-12; see also 3:44).

2. During Prosecution, the Applicant Narrowed the Claimed Invention Solely to the Electronic Version, and then to the Digital Electronic Version

Events unfolded during prosecution whereby the Applicants first disclaimed non-electronic embodiments that might have been covered by the first section of the DETAILED DESCRIPTION (by adding limiting "authenticator" language), and then disclaimed the full breadth (e.g., non-digital aspects) of the second section of the DETAILED DESCRIPTION (by adding limiting "mathematical association" or related mathematical function language).

Before the first office action of the '219 patent, the claims did not include any sort of "authenticator" language, or "mathematical association" language. After a rejection

over Bouricius, the Applicants filed a February 3, 2000 Amendment. (Ex. C). In the Amendment, the Applicant added to each independent claim additional language that, among other things, required "an authenticator functioning as a non-interested third party with respect to the sender and the receiver." (Ex. C, at 2-8). Thus, while the specification described the invention as encompassing paper documents and human couriers (the first section of the DETAILED DESCRIPTION), the invention as now claimed by amendment only encompassed electronic means.

After a later rejection, the Applicants lodged another amendment on August 18, 2000. (Ex. D). This time, the application claim that became claim 60 was amended to include the language, "wherein at least one of the steps of associating and securing utilizes mathematical association methods for a selected portion of a combination of the content data and the dispatched record data." (Ex. D, at 5). In a similar fashion, at the same time, the application claim that became claim 30 was amended to include language applying a function F_i to a subset S_i of a set A having digital elements $a_1, \ldots, a_n$ to generate a result B with elements $b_1, \ldots, b_m$, and thus to call out its own wording of a so-called "mathematical association method." (Ex. D at 3).

On August 28, 2000, in response to this final culminating amendment, the USPTO mailed its Notice of Allowance, explaining, that the "prior art, singly and in combination, does not teach the apparatus of the Applicant where means are found to provide a set A comprising a plurality of information elements, and where at least one means for securing comprises a means for generating a new set B, in the manner of the Applicant." (Ex. E). The USPTO clearly understood that the claimed methods all involved an apparatus. The patent thereafter issued on January 30, 2001. Of the two

independent claims attacked by Defendants, claim 30 expressly limits the claim to contents of transmitted information "being electronically transmitted to said recipient." In addition, on May 1, 2012, the USPTO issued its Notice of Intent to Issue Reexamination Certificate, after claim amendments that maintained substantially identical claim scope as before, and after the USPTO decided the prior art currently being used by Defendants in this case to attack the patent did not render the amended claims unpatentable. (Ex. A).

All independent claims of the later-issuing '334 patent also contain language requiring an "authenticator functioning as a non-interested third party," and mathematical function language that embodies "mathematical association methods" as defined in the patent. Of the three independent claims attacked by Defendants, claim 18 expressly limits the claim to "electronically transmitted" contents of a dispatch.

3. Construction of Dispatcher and Authenticator

The '219 and '334 patents preserve a distinction between a "dispatcher" and an "authenticator," but state that both roles may be played by a single device or part of a system. (*E.g.*, Ex. B, at 8:41-60, claim 11). As mentioned above, an "authenticator" at its broadest must be construed to be an "electronic means." It may be, but need not be, a computer. Defendants point out that certain dependent claims call out an optional "computer." (Br. 15). While correct, this fact cannot undermine Rmail's construction. The dependent claim scope is consistent with Rmail's construction. The independent claim has scope that broadly covers "electronic means," while a dependent claim further narrows and defines this to be optionally a computer.

Defendants are right about one thing, though: the use of dependent claims to construe the independent claims. In this case, dependent claims help construe "dispatcher." Dependent claim 35 of the '219 patent states, "A method according to claim 34, wherein said electronic means comprises a combination of at least one of the following: a communication network, a scanning device, a dispatcher, and a computer." Therefore, the patents as a whole consider a "dispatcher" of the claims to connote an "electronic means," consistently with how the patents treat an "authenticator."

4. Construction of Mathematical Association Methods

The term "mathematical association methods" is defined in the specification. (10:13-29). Likewise, the claimed recitation of functions F acting on subsets S of set A to obtain results B is itself considered a "mathematical association." (12:1-14). As defined, a "mathematical association" limits the operations to those on "digital representations" – *i.e.*, the zeros and ones of computers and digital signal processors. Claim 30 of the '219 patent confirms this construction, as it contains an express reference to a "digital representation" in this context. (22:7-8). The Feldbaus did not invent mathematical associations *per se*, and chose not to limit their claimed invention to any particular one. But they did claim the inventive application of mathematical associations within their claimed inventions as a whole.

B. Unconventional Aspects of the Claimed Inventions Confirm the Claims Comprise an Invention in the Application of a Formula, and Do Not Preempt any Field

As the reexamination results show, Defendants came up empty when seeking prior art to attack validity. The USPTO found that the claims patentable over this prior art. Though the claims were amended, Defendants do not contend the amendments

narrow the scope in any significant way. As previously described in an earlier brief, the claims as amended have the same scope of the original claims as construed by the Central District of California. (Dkt. No. 97, at 5).

Among the limitations that caused the claims as a whole to survive the prior art were narrowing recitations of what constitutes the dispatch information used, alongside a representation of the original message, in the authentication process. It may include more, but at least must include the destination information and the time of the dispatch (*i.e.*, the time of the relaying of the message from the authenticator/dispatcher outbound to the ultimate recipient). Neither the USPTO nor the Defendants could find any prior art disclosing this unique combination of dispatch information, used in this unique way, regardless of any use or non-use of electronic means, digital processes or mathematical associations.[5]

III. LEGAL STANDARDS

Defendants' motion raises the question of whether the patents-in-suit claim solely "abstract ideas" – a judicially-created exception to the broad classes of statutory subject matter.

Under the Patent Act of 1952, processes are considered patent-eligible subject matter. 35 U.S.C. § 101 ("any new and useful process"). This includes "a new use of a known process [or] machine." 35 U.S.C. § 100(b). "The Supreme Court has articulated only three exceptions to the Patent Act's broad patent-eligibility principles: 'laws of

[5] Defendants significantly misstate the patents' own discussion of prior art when suggesting that "message content" was already stated to be known as "delivery-report type data." (Br. 8-9). On the contrary, the patents' background section shows the inventors believed the use of "message content" as one of the ingredients for making authentication information was at least one novel aspect of what they had accomplished.

nature, physical phenomena, and abstract ideas.'" *Research Corporation Technologies, Inc. v. Microsoft Corp.*, 627 F.3d 859, 867 (Fed. Cir. 2010) (citing *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)).[6] Consideration of these three exceptions is a "coarse eligibility filter," whereas other parts of the Patent Act (e.g., Section 112) "provide[] powerful tools to weed out claims that may present a vague or indefinite disclosure of the invention." *Id.* at 869. Defendants do not dispute the claims under review fall under the literal statutory language of Sections 100 and 101.

"The Supreme Court did not presume to provide a rigid formula or definition for abstractness." *Id.* at 868 (citing *Bilski v. Kappos*, 130 S. Ct. 3218, 3236 (2010)). The Federal Circuit does not "presume to define 'abstract' beyond the recognition that this disqualifying characteristic should exhibit itself so manifestly as to override the broad statutory categories of eligible subject matter and the statutory context that directs primary attention on the patentability criteria of the rest of the Patent Act." *Id.*[7] For example, where a claimed invention "presents functional and palpable applications in the field of computer technology," the Federal Circuit held it not to be impermissibly abstract. *Id.* at 868-69 (holding that manipulations of halftone image data using algorithms or formulas "do not bring this invention even close to abstractness that would override the statutory categories and context."). In reaching its patent-eligibility conclusion in *Research Corporation*, the Federal Circuit quoted *Diehr*, 450 U.S. at 188,

[6] Defendants' counsel here was also Microsoft counsel in the *Research Corporation* appeal. There, the Federal Circuit rejected Microsoft's Section 101 invalidity arguments.

[7] Anticipating that Rmail would cite the "so manifestly" standard of *Research Corporation*, Defendants argue that *Prometheus* did not "require that the idea's ineligibility for patenting be manifest, as had some Federal Circuit panels." (Br. 7). But neither did *Prometheus* reject it. Defendants make too much of the Supreme Court's silence on a point, particularly where *Prometheus* was a "law of nature" case, not an "abstract ideas" case.

to reaffirm the principle that "claims must be considered as a whole" in the analysis, not "dissected" into old and new elements where the old elements are to be ignored. *Id.* at 869; *see also Classen Immunotherapies, Inc. v. Biogen Idec*, 659 F.3d 1057, 1068 (Fed. Cir. 2011) ("The invention as a whole, including the scope asserted by the patentee must be considered.").

Claim construction may be necessary to "clarify the actual subject matter at stake in the invention [and] enlighten, or even answer, questions about subject matter abstractness." *Ultramercial, LLC v. Hulu, LLC*, 657 F.3d 1323, 1325 (Fed. Cir. 2011). If such a claim construction reveals that a patent is claiming "an application of an abstract idea," such an invention "may well be deserving of patent protection." *Id.* at 1327. That is because the Patent Act covers "applied ideas." *Id.* When an invention has a specific application to, or is an improvement to, technologies in the marketplace, it is "not likely to be so abstract that [it] override[s] the statutory language and framework of the Patent Act." *Id.* at 1328 (quoting *Research Corp.*, 627 F.3d at 869).[8] For example, the Federal Circuit held the *Ultramercial* patent to be eligible subject matter because it did "not simply claim the age-old idea that advertising can serve as currency. Instead, the [patent] discloses a practical application of this idea[, claiming] a particular method for monetizing copyrighted products, comprising [numerous steps]." *Id.* Those steps included many "likely to require intricate and complex computer programming." *Id.* While the Ultramercial patent did not specify "a particular mechanism for delivering

[8] The Court need not conclude the Defendants infringe to confirm that the '219 and '334 patents involve applications to and improvements to technologies that currently exist in the marketplace. Rmail acquired the patents themselves after its related operating company, RPost, was held to be an infringer by the Central District of California (Ex. F, decision later vacated on other grounds).

media content to the consumer (i.e., FTP downloads, email, or real-time streaming)," such breadth "does not render the claimed subject matter impermissibly abstract." *Id.* at 1329.

When a machine is integral to the process claims at issue, the claims cross the patent eligibility threshold. *SiRF Technology, Inc. v. U.S. Int'l Trade Comm'n*, 601 F.3d 1319, 1332 (Fed. Cir. 2010). The patents at issue in the *SiRF* case involved digital calculations performed at a GPS receiver. The Federal Circuit held that it "is clear that the methods at issue could not be performed without the use of a GPS receiver . . ." and that such a receiver "places a meaningful limit on the scope of the claims." *Id.* at 1332-33. The meaningful limits existed because such a device:

> 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. We are not dealing with a situation in which there is a method that can be performed without a machine. Contrary to appellants' contention, there is no evidence here that the calculations here can be performed entirely in the human mind. Here, as described, the use of a GPS receiver is essential to the operation of the claimed methods.

Id. at 1332-33.

The Federal Circuit decisions cited above analyze the "abstractness" question consistently with the four prominent post-Patent Act of 1952 Supreme Court cases that issued holdings on the same issue.

In *Gottschalk v. Benson*, 409 U.S. 63 (1972), the Court held ineligible a method that converted binary-coded decimal (BCD) numbers into pure binary numbers. The mathematical procedures could be performed either by computer, or by human thought with pencil and paper, though the algorithm had "no substantial practical application"

except with programmable digital computers. *Id.* at 71. Since the method was "so abstract and sweeping as to cover both known and unknown uses of the BCD to pure binary conversion," the Court held it patent-ineligible. Two of the claims did have "reentrant shift register" limitations to hold the BCD signals. But as mentioned, the only substantial practical application of the formula was in connection with a digital computer. That is why the computer part added no substantial limitation to the method, since such a method would only be performed on a computer anyway. In that sense, the rejected claim would "pre-empt" the mathematical formula. *Benson* has been applied to prohibit patent claims that seek to claim and preempt all substantial uses of a particular mathematical formula, or impermissibly claim "the equivalent of human mental work" *Cybersource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1371-72, 1376 (Fed. Cir. 2011) (finding ineligible a patent claim in which all of the method steps "can be performed in the human mind or by a human using a pen and paper," and distinguishing patent eligibility in *SiRF* because the calculations there could not be "performed entirely in the human mind.").

In *Parker v. Flook*, 437 U.S. 584 (1978), the applicant sought to claim the calculation of certain alarm limits for a chemical reaction. The claims at issue recited their field of use – catalytic chemical conversion of hydrocarbons. The Court held that reciting a practical application for the purely mental calculation could not alone make the invention patent eligible. *Id.* at 590. For purposes of analysis, the Court gave no credit to the fact that the formula itself was claimed to be novel.

In *Diehr*, the applicant applied a very old formula (the Arrhenius equation) to a system that cured rubber. Unlike *Flook*, this claim passed. The Court held it permissible

to claim an invention in the application of a mathematical formula, even where the mathematical formula is old or well known.

In *Bilski*, the Court held ineligible a patent directed to the process of hedging contracts in energy markets. The claim sought coverage solely of an age-old business practice – hedging – and would therefore preempt an abstract idea. The Court rejected calls to form a test for patent eligibility based on whether a process involved a machine or a transformation. The Court instead stated that future cases should be evaluated by traditional common law analysis, with due regard for the previous trio of decisions by the Court.

While not an abstractness case (it involved instead a "law of nature" analysis), *Prometheus* is also instructive. In *Prometheus*, the Court reconfirmed the *Diehr* framework. It confirmed that subject matter may be deserving of patent protection if it embodies an application of a mathematical formula to a known structure or process. It observed the *Diehr* Court "nowhere suggested that all these [non-mathematical] steps, or at least the combination of those steps, were in context obvious, already in use, or purely conventional." *Id.* at 1299. Since this was so, the non-mathematical aspects "transformed the process into an inventive application of the formula." *Id.*

IV. ANALYSIS

The most recent Federal Circuit panel to weigh in has called the current Section 101 jurisprudence a "murky morass," and has urged that Section 101 should usually not be addressed by a court before it addresses "the conditions of patentability defenses as the statute provides," namely Sections 102 and 103, and disclosure defenses under Section 112. *Myspace*, 672 F.3d at 1260-61 (describing by analogy the Supreme Court's

avoidance of deciding cases on Constitutional grounds). When claim construction was at issue in one Section 101 analysis, the Federal Circuit remanded for the district court to perform claim construction in the first instance, rather than do so first on appeal. *Fuzzysharp Tech.'s, Inc. v. 3dLabs Inc.*, 2011 U.S. App. LEXIS 22274, *11-*12 (Fed. Cir. Nov. 4, 2011) (nonprecedential). Here though, once certain terms are properly construed, and if the Court deems (contrary to the arguments in Section VI) that Congress has permitted a Section 101 defense, the Court should find it a simple matter to reject Defendants' Section 101 attack even at this early stage.

That is because the claims at issue are like those of *Diehr*, *Research Corporation*, *Ultramercial* and *SiRF*. They are not like those of *Benson*, *Flook* or *Bilski*. *See also Prompt Medical Sys., L.P. v. AllScriptsMiSys Healthcare Solutions, Inc.*, 2012 U.S. Dist. LEXIS 30694, at *6-*8 (E.D. Tex. Feb. 13, 2012) (denying summary judgment of Section 101 invalidity for a claimed process of generating certain medical procedure codes, in part because Defendants' "high-level reading of the claims ignores important limitations," and because there were "several points of novelty" other than an algorithm in the claims under review).

Like in *Diehr*, the mathematical association limitations reside within patent claims that are otherwise nonobvious and unconventional. The USPTO's confirmation of claims during reexamination confirms this is so. At a minimum, in their summary judgment motion, Defendants do not even attempt to offer a rigorous element-by-element analysis of validity issues. The use of the outbound-from-the-dispatcher time stamp stands out as particularly novel over the prior art, particularly in combination. Also, the addition of mathematical association methods to the claims in a way that helped obtain

their patentability during the original prosecution shows that the '219 and '334 patents use abstract ideas, if at all, only within an inventive application. Defendants do not try to show otherwise.

Like in *Research Corporation*, the claims at issue also present a functional and palpable application in the field of message authentication technology. The prior holding of RPost infringement (before Rmail obtained the patents) confirms as well that these patents have specific application in the marketplace (see note 8, above).

Like in *Ultramercial*, the patents claim a practical application of an idea in message authentication, not merely the idea itself. They claim a particular method for a device functioning as a noninterested third party to generate the authentication information that will be of high value to the participants of a message exchange. Also like in *Ultramercial*, many of the steps would likely require intricate and complex computer programming in a given implementation – for instance the authenticator.[9] That is almost compelled, in fact, by the scope of the "mathematical association" being limited to digital representations, if not also by the fact that most of the claims expressly require electronic transmission of digital information.

Like in *SiRF*, the patents claim substantial use of a specific machine – the authenticator. While the authenticator is claimed broadly, it is no broader in scope than an electronic means that performs this claimed role. The authenticator plays a central role in every independent claim, functioning as the noninterested third party that is essential to performance and trustworthiness of the claimed process steps. It is essential

[9] The *Ultramercial* court concluded complex computer programming would likely be required even for limitations that did not, of themselves, seem to recite any kind of computer language (e.g., step 4: "restricting general public access to said media product").

to the operation of the whole process; Defendants make no suggestion that it is there simply to speed up a process that would already happen in its absence, such as through pencil-and-paper calculations.

On the other hand, the claims differ greatly from those in *Benson*. The claims do not call out purely mental steps – receipt of information is physical, and is performed by a device called the authenticator. Nor do the claims preempt all uses of mathematical association – a wholly ridiculous notion. The '219 and '334 patents use mathematical association solely in the context of the authentication activities carried out by the other steps. Nor, unlike *Benson*, can it be said that the patent claims as a whole preempt anything. They are limited to electronic means. Defendants' spies and space aliens are safe from any infringement charge. And to boot, they are limited to the particular kind of dispatch information specially called out in each claim. Not every possible use of an authenticator need infringe the claimed methods – only those uses that perform exactly the recited steps. The claims in *Benson* only had application in the operation of computers. That was why the "shift register" limitation did nothing to contradict that the claims would preempt all uses of the recited mathematical formula. Here, Defendants' own arguments confirm that non-electronic uses of the claimed mathematical associations are possible and foreseeable (*e.g.*, their feigned concern for CIA mathematicians and extraterrestrials). Unlike *Benson*, these uses are not covered by the claims, and thus the claims do not preempt mathematical associations.

The claims also differ greatly from *Flook*. The '219 and '334 patent claims do not seek to evade the prohibition on pure mental steps or algorithms by attempting to

limit an otherwise ineligible claim to a specific field. Again, the claims Defendants attack do not call out pure mental steps. Any comparison with *Flook* is meritless.

Finally, the claims differ from *Bilski*. The claims cover a particular application of technology in the field of message authentication. They do not seek to preempt an entire prior business activity, such as hedging in the energy markets. In addition, *Bilski* itself confirms that it is an important clue in favor of patent eligibility when a claim is directed to a machine. That is the case here, since the authenticator is an electronic means.

As shown, by every legal standard derivable within the aptly labeled "murky morass" of Section 101 jurisprudence, the '219 and '334 patents are eligible for patenting under Section 101 of the Patent Act, and fall outside any exception for abstract ideas.

V. THE CLAIMS ALSO SATISFY THE MACHINE OR TRANSFORMATION TEST

Contrary to Defendants' arguments, the claims at issue also involve both a particular machine, and a physical transformation. Satisfying the machine or transformation test is not necessary, but it is an "important and useful clue" that a patent claim embodies eligible subject matter. *Bilski*, 130 S. Ct. at 3226.

A. Machine

Here, the particular machine is an "authenticator," and in some claims, also a "dispatcher." These structures are described in functional terms, but that does not mean they are not particular structures. For example, in *Diehr*, the "particular machine" involved with the use of the Arrhenius equation was "a rubber-molding press." *Diehr*, 450 U.S. at 181. Such a structure has a doubly-functional name: "rubber-molding" and "press." The press itself was not claimed to be made of any particular material (certainly not of rubber). What was particular about the *Diehr* machine – what distinguished it

from other machines – was its function: to mold rubber by pressing. Thus in *Diehr*, the Court recognized that claimed applications of processes to structures can be patent eligible even where those structures are characterized in purely functional terms, without narrowing limitations governing how they are constructed. *See also Cochrane v. Deener*, 94 U.S. 780, 788-89 (1877) (Concerning a flour bolting process, "a process may be patentable, irrespective of the particular form of the instrumentalities used . . . ."); *Greenberg v. Ethicon Endo-Surgery*, 91 F.3d 1580, 1583 (Fed. Cir. 1996) ("Many devices take their names from the functions they perform. The examples are innumerable, such as 'filter,' 'brake,' 'clamp,' 'screwdriver,' or 'lock.'".).

An "authenticator" is a particular machine that generates authentication information. A "dispatcher" is a particular machine that relays ("dispatches") information from a sender to a recipient. They are still particular machines, even though they are recited using functional language, and without narrowing the claim to a specific manner of construction. Defendants try to avoid this conclusion by pointing to dependent claim 13 of the '334 patent, which states the authenticator may "comprise" a "message transmission forwarding service." (Br. 17). But this use of the word "service" does not expand the sense of "authenticator" beyond an electronic means. Claim 13 simply narrows the invention for that claim to use of the electronic means alongside a service, hence the word "comprises" (which in patent law means "including but not limited to").

B. Transformation

Likewise, the claimed methods involve physical transformations. The Supreme Court's *Bilski* decision left intact the Federal Circuit's standards for deciding when a claim involves a physical transformation. The Federal Circuit has held that a process that

involves manipulation of signals or data can be deemed eligible if those processes involve "the transformation or conversion of subject matter representative of or constituting physical activity or objects." *In re Schrader*, 22 F.3d 290, 295 (Fed. Cir. 1994). Examples that pass this test include: manipulation of electrical signals and data representative of human cardiac activity; manipulation of data representing CAT scan images; and manipulation of signals representative of reflected seismic energy. *Id.*

Here, senders and recipients are mentioned in the claims. Senders and recipients are, if nothing else, physically instantiated in the real world. The transmission of a dispatch from one location to another is likewise a physical activity. It occurs at a time – indeed in every claim, the generation of authentication information acts on data representing the time of third party dispatch to the recipient. Even if the relevant dispatch originates as an electronic signal inside a computer and is dispatched wirelessly to another computer; even if the dispatched information is never printed or viewed on a computer display; even if its transmission were initiated and recorded by wholly automated systems: its transmission from one point to another is as surely a physical activity as the transmission of electrical signals within the muscles of the heart. *Arrhythmia Research Tech., Inc. v. Corozonix Corp.*, 958 F.2d 1053, 1059-60 (Fed. Cir. 1992) (manipulation of electrical signals and data representative of human cardiac activity patent-eligible subject matter). Accordingly, the claimed processes are patent-eligible even if they did nothing more than describe transformations of data about physical sending and receiving activities.

Not only are the inputs representative of the physical world. The outputs are, too. Each claim also generates "authentication information." Such "authentication

information" is "secured" against "tampering." This demonstrates that authentication information must already be considered physically embodied. One cannot "tamper" with the abstract mentally-held solution to an algorithm. An abstract idea cannot be secured against tampering. Nor can one render it tamper evident or tamper proof. Only a physical representation of the solution can be tampered or made resistant to tampering, and rendering such a physical representation so resistant is a step in the claimed process. Since the steps of the claimed methods also transform a physical instance from one (tamperable) form to another (tamper proof) form, they pass the transformation test for this additional reason.

VI. CONGRESS DID NOT PERMIT SECTION 101 TO SUPPLY A LITIGATION DEFENSE

Rmail closes by asking the Court to recognize and apply all appropriate statutory barriers against entertaining Defendants' Section 101 defense. The entire jurisprudential "murky morass" of subject matter eligibility need not arise again in any litigation. *Myspace*, 672 F.3d at 1260 (using "murky morass" label). Rmail acknowledges that this argument is for the good faith extension or modification of existing caselaw. Courts until now have uniformly overlooked Congressional will on this question.

Namely, while Section 101 analyses are appropriate in Patent Office application proceedings, this Court lacks any statutory basis for analyzing Section 101 issues as a litigation defense. Patent defenses are statutory. Under the Patent Act of 1952, only enumerated patent defenses exist. *Aristocrat Tech. v. Int'l Game Tech.,* 543 F.3d 657, 661-63 (Fed. Cir. 2008). If an issue is not denominated an infringement defense within the Patent Act, then the Court lacks jurisdiction to address it. *Id.*

Section 282 states in relevant part as follows:

> The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded:
>
> (1) Noninfringement, absence of liability for infringement or unenforceability,
>
> (2) Invalidity of the patent or any claim in suit on any ground specified in part II of this title as a condition for patentability,
>
> (3) Invalidity of the patent or any claim in suit for failure to comply with –
>
> > (A) any requirement of section 112, except that the failure to disclose the best mode shall not be a basis on which any claim of a patent may be canceled or held invalid or otherwise unenforceable; or
> >
> > (B) any requirement of section 251.
>
> (4) Any other fact or act made a defense by this title.

35 U.S.C. § 282. Only parts (2) or (4) may even arguably apply to subject matter ineligibility under Section 101. Part (2) does not apply because the "ground specified in part II of this title as a condition for patentability" applies solely to Sections 102 and 103 (as confirmed by their headings). Part (4) does not apply because statutory language must clearly demarcate a fact or act as a litigation defense for it to apply.

In *Aristocrat*, the defendant tried to advance a defense of "improper revival" and "abandonment" of a patent during Patent Office proceedings. *Aristocrat*, 543 F.3d at 660. The Federal Circuit observed that Section 282 of the Patent Act of 1952 (as amended) restricted the range of recognized defenses only to those listed by, or incorporated into, Section 282. *Id*. at 661-63. Improper revival and abandonment were neither listed nor incorporated through other statutory sections, and therefore were not proper defenses. *Id*. at 662-63. Even though the concept of abandonment existed in the Patent Act, it never appeared in any context related to litigation defenses. *Id*. Here, no reference to "ineligible subject matter" appears in Section 282. The language of Section 101 does not

fall within the catchall of part (4) for the same reason "improper revival" and "abandonment" did not. Section 101 is couched in terms of what the Patent Office may bestow, not in terms of how a defendant may defend ("Whoever invents . . . may obtain a patent therefor . . . ."). The argument for eliminating the defense is therefore stronger than that for eliminating improper revival and abandonment. Section 101 does not supply a litigation defense.

It does not matter that the statutory misinterpretation has lasted so long, or so pervades conventional thinking. Even a long-term statutory misconstruction will not bar restoring the patent system to its statutory limits. *See Central Bank of Denver v. First Interstate Bank of Denver*, 511 U.S. 164, 177, 191 (1994), *superseded on other grounds by* 15 USC § 78t(e) (1995) (overruling sixty years of allowance of a statutory cause of action because Congress had not expressly provided for that cause of action). Four recent Supreme Court cases arose in the USPTO administrative context, and are thus consistent with Rmail's argument: *Benson, Flook, Diehr, Bilski*. A fifth, *Prometheus*, admittedly arose within an infringement defense context. However, no one seems to have pointed out to the Supreme Court this important threshold issue of statutory construction, and statutory limitations on the powers of the federal courts. *Prometheus* thus does not bar this Court from issuing a correct ruling in the present adversarial context.

VII. CONCLUSION

For all the reasons above, the '219 and '334 patents claim patent-eligible subject matter under Section 101 of the Patent Act. They exceed all standards discernible in the caselaw, and certainly do not embody any "manifest" lack of eligibility for patenting. And regardless of patent eligibility *vel non*, Defendants have simply not presented a

defense that Congress has allowed to exist. The Court should deny their motion for summary judgment of Section 101 invalidity.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that counsel of record who are deemed to have consented to electronic service are being served this 18th day of May 2012, with a copy of this document via the Court's CM/ECF system per Local Rule CV-5-(a)(3).

/s/ Robert P. Greenspoon
Robert P. Greenspoon