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Are "Methods of Doing Business" Finally Out of Business as a Statutory Rejection?

Rinaldo Del Gallo, III *

 Mr. Del Gallo is a registered patent attorney and an associate of the law firm of MacDonald, Illig, Jones & Britton LLP located in Erie Pennsylvania. All opinions contained herein are solely that of Mr. Del Gallo and not the law firm of MacDonald, Illig, Jones & Britton LLP. He would like to give special thanks to J. Randall Beckers, John Garvey, Richard A. Gollhofer, and David M. Pitcher of the law firm of Staas & Halsey for their invaluable assistance in making this article possible. This article is dedicated to my wife Yulei, my father and my mother.

Overview

"But he doesn't have anything on!" cried a little child.

"Listen to the innocent one," said the proud father. And the people whispered among each other and repeated what the child had said.

"He doesn't have anything on. There's a little child who says that he has nothing on."

"He has nothing on!" shouted all the people at last.

The emperor shivered, for he was certain that they were right; but he thought, "I must bear it until the procession is over." And he walked even more proudly, and the two gentlemen of the imperial bedchamber went on carrying the train that wasn't there. n1

For years, patent lawyers have been operating under the assumption that there is a "negative rule" of subject matter eligibility for patents: that so-called "business methods" or "business systems" are not patentable. A close look at the case law reveals no such conclusion. To date, no court majority has ever held that a step-by-step method that incorporated a novel and non-obvious physical means to accomplish that method was per se unpatentable simply because the method was directed to a way to conduct business rather than a way to make or manufacture.

[*404] Further, the business method exception is of dubious analytic value. Nearly every case that supposedly invoked this rule simply restated the longstanding proposition that naked ideas, bereft of anything physically inventive, are not patentable. At best, these allusions to business were unnecessary. At worst, they caused confusion.

Considering this history, perhaps it is no surprise that something is missing from the 1996 Manual of Patent Examining Procedure (MPEP). No longer is the following passage included in the MPEP

706.03:

Though seemingly within the category of process or method, a method of doing business can be rejected as not being within the statutory classes. See *Hotel Security Checking Co. v. Lorraine Co., 160 F. 467 (2nd Cir. 1908)* and *In re Wait, 24 U.S.P.Q. 88, 22 C.C.P.A. 822 (1934).* n2

This raises the question: Has the holding of Hotel Security been followed?

I. The Historic Evolution of Methods as Patents

Contrary to popular perception, defining the proper subject matter of patents has long been disputed and is not a recent product of the computer and biotech revolution. Historically, the more comfortable concern of the patent law was, and continues to be, the physical, not the ideal. For instance, long has it been said that discoveries of nature, n3 ideas, n4 or mathematical algorithms n5 are not patentable.

The grant of a patent was historically limited to physical objects alone. The patent law had been disinclined to allow steps or procedures to be patentable subject matter. As early as the eighteenth century, English cases showed great hesitancy in granting patents to processes. In order to obtain a patent there had to be a "vendible substance." n6 Whenever a new operation resulted in a new substance, it was the substance and not the process that was the object of the letters patent. n7 No degree of novelty and genius would render the process the exclusive property of its inventor. In fact, the architect of an ingenious new method of vulcanizing rubber was not even considered to be an inventor but rather the discoverer of a law of nature. As described in Professor

[*405] Robinson's much celebrated late eighteenth century treatise on patent law:

An art . . . is simply a force in operation. [The early cases] assumed that the inventor of an art was merely the discoverer of the natural operative force, unless he also had devised the instruments through which the force was practically applied. n8

It is impossible to pinpoint a time in the case law (before explicit statutory language provided the final resolution) when methods were finally allowed. Emblematic of the schism in opinion was the English case of Boulton and Watt v. Bull, n9 quoted extensively in the Robinson treatise. n10 The inventor, Watt, had devised a method of reducing the consumption of steam, and consequently of fuel, needed to power engines. Some of the judges thought that only machines or substances could be patented. The problem with Watt's "invention" (or "discovery" as some of the judges would call it) was that no new machines were needed, nor was there a new "vendible substance." The salient question was whether Watt could get a patent regardless. Watt ultimately received his patent, but the question was not brought to rest. Professor Robinson noted that the dissenting judges "advanced objections and stated doctrines which for a long time found adherents in the bar and on the bench." n11

It is not difficult to imagine, against this limited view of the proper subject of patents, n12 that if the artisan's resourceful new method of making a known manufacture with known instruments was unpatentable, then the merchant's new method of conducting business had no hope.

II. The Birth of the Business Method Exception

There is no discussion of business methods in Robinson's treatise. It is commonly believed that the genesis of the business method exception was in Hotel Security Checking Co. v. Lorraine Co., n13 although there are cases involving methods of doing business that predate it. n14 This case

[*406] is emphasized because it has led to the fallacy that all business systems are per se unpatentable. Hotel Security does not so hold, and the practitioner should be disabused of this commonly held belief.

In Hotel Security, the method involved was designed to prevent fraud and peculation by waiters and cashiers in hotels and restaurants. n15 The court did not find the "invention" new and useful. Reduced by all of the unnecessary embellishments, the invention worked as follows: a head waiter was to assign every waiter a number; the waiters were to be equipped with slips with their numbers on them; on a separate piece of paper, the head waiter maintained records of the food each waiter was taking from the kitchen; when the waiter or customer paid for the meal, the head cashier took the slip; so by comparing the food taken from kitchen to the amount paid, indicated by the returned slips, it could be ascertained if a waiter was pocketing the cost of the meal as well as his tip.

The court said, "The fundamental principle of the system is as old as the art of bookkeeping, i.e., charging the goods of the employer to the agent who takes them." n16 In short, the patent was struck for lack of novelty and invention, not because it was improper subject matter for a patent. The court stated in explicit terms, "If at the time of [the inventor's] application, there had been no system of bookkeeping of any kind in restaurants, we would be confronted with the question whether a new and useful system of cash-registering and account-checking is such an art as is patentable under the statute." n17 The Hotel Security court wanted to make clear that their comments regarding the propriety of accepting a business method as patentable subject matter were obiter dicta.

The statute that defined the subject matter of patents was

4886 of the Revised Statutes which read, "any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter may obtain a patent." n18 This was the same language employed by Thomas Jefferson in the Patent Act of 1793. n19 Today, after the

[*407] recodification of 1952, the statute that defines patentability is essentially the same except the word "art" is replaced with "process." n20 Instead of relying on the definition of "art" as it had evolved through the cases, the Hotel Security court jettisoned nearly a century of case law defining the term and, instead, employed Webster's dictionary definition of "art":

> The employment of means to accomplish some desired end; the adaptation of things in the natural world to the uses of life; the application of knowledge or power to practical purposes. n21

However bereft of novelty this invention was, it seems difficult (using words as they are currently used) to find that the patent did not "employ a means to accomplish an end," nor at least be "the application of knowledge or power to [a] practical purpose," thus fulfilling the dictionary definition of the term "art." Today, when we think of "means" or "the application of knowledge" we do not limit ourselves to physical phenomena. When we think of "means" or "applying knowledge" we include mental calculations and decision making. The court nonetheless held that the method was not an art. From the context of the case, the Hotel Security court did not consider the term "means" to incorporate these human factors.

A better understanding of Hotel Security and the court's view as to what constitutes an "art" can come from one edifying sentence. This sentence demonstrates that the lack of an inventive physical nexus, not the presence of a business method, was the chief concern of the court. The court strongly implied that the term "art" is triggered by an inventive physical transformation or physical method of accomplishing a task. The court pronounced, "It cannot be maintained that the physical means described by [the inventor], - the sheet and slips, - apart from the manner of their use, present any new and useful feature." n22

Clearly, the concern of the court was that the ingeniousness of the method was not the transformation or implementation of physical materials, but the mental steps. "Means" meant "physical means" as opposed to intangible steps that were primarily the product of the mind. The only physical aspects of the invention were a pen and paper; its genius, if any, was in the mental steps involved, a problem usually associated with the contemporary problems with patenting algorithms. n23

[*408] In short, the court was saying an "art" was a method of implementing physical matter or forces in novel ways. The decision had nothing to do with a rejection on the grounds that the invention related to a business method. Rather, the decision was dedicated to defining and clarifying the meaning of the term "art."

In one sentence, the Hotel Security court unwittingly gave birth to the business method exception by proclaiming:

A system of transacting business disconnected from the means for carrying out the system is not, with the most liberal interpretation of the term, an art. Advice is not patentable. . . . No mere abstraction, n24 no idea, however brilliant, can be the subject of a patent irrespective of the means designed to give it effect. n25

While the seemingly clear import of the sentence was that an invention of a process had to be directed to a physical means, the sentence would be, for nearly a century, enshrined as holding that all business systems were per se unpatentable.

This pattern would persist. Courts would declare that there must be a physical nexus by the employment of an inventive physical means. These cases would then be fallaciously recited for the principle that business methods are not patentable. As time passed, these misinterpreted cases were queued up by authors to lend support to the myth that business systems or methods are per se improper subject matter for patents. A phantasmic body of law had been created.

While the edict that "businesses systems" are per se unpatentable may be correct if one were to adopt the confined view that a "system" is only the mental calculation to be used in a method, the more common meaning of "system" is the interaction of physical forces and bodies, as well as perhaps the mental reactions and processes invoked. Hotel Security concludes by stating that there was "no patentable novelty . . . in the physical means" of the invention, n26 implying the shrewdness of the mental steps was of no consequence in determining patentability. The more accurate holding of Hotel Security is that physical manipulation,

[*409] not mental steps (the manipulation of numbers or ideas by humans), is the proper subject matter of a method claim. The case was recited decade after decade for the wooden holding that all business methods are unpatentable - even the case in which the system included novel physical means and transformations and may even have been void of human judgment and decision making - when in fact the court had no concern that the method related to doing business. n27

Possibly, the better interpretation of the sentence that gave birth to the business method exception is that an "art" is a process, at least in the context of the patent law. In Robinson's treatise an "art" is defined as a process: "An art or operation is an act or series of acts performed by some physical agent upon some physical object, and producing in such object some change either of character or of condition." n28 Professor Robinson supports his definition with the definition of a process in Cochrane v. Deener: n29 "A process is a mode of treatment of certain materials to produce a given result. It is an act, or series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing . . . In the language of the patent law, it is an art." n30 While this passage in Cochrane suggests that there may be things other than processes that may nonetheless be an art, the cases do not seem to vindicate this position. Completing this development of the law,

[*410] as mentioned previously, the term "art" was ultimately replaced by "process" in the statute, leaving no room for dispute. n31

As stated earlier, in order to have a patentable process, there must be an inventive mechanism to physically manipulate objects using matter or the forces of nature, but not mental steps. Citing U.S. Credit System Co. v. American Credit Indemnity Co., n32 a case which concerned a patent for a "means for securing merchants . . . from excessive loss by bad debts," the Hotel Security court noted "there is nothing peculiar or novel in preparing a sheet of paper with headings . . . and whatever peculiarity there may be about the headings in this case is a peculiarity resulting from the transactions themselves." n33 The holding that intangible transactions are not patentable seems to be a rule of patent law from its inception to this day.

Conceivably, Hotel Security can be viewed as arresting the then broadening scope of that which was patentable. While a process had evolved from the state of affairs when only "vendible substances" were patentable, the liberalization of what was patentable was not limitless. Mere paperwork, or involving the mental reactions or senses of individuals would not suffice to constitute a recognizable patentable subject. The vestigial need to have something physical - albeit in the physical means rather than the end product - was still going to be central in patent law.

The Hotel Security court was only repeating what Professor Robinson had said earlier in a section of his treatise entitled "An art must produce physical effects." n34 Robinson teaches, "But though an art embraces so wide a field of inventive skill, it includes only such operations as are capable of producing physical effects. Every invention, when applied according to the design of its inventor, must accomplish some

[*411] change in the character or condition of material objects." n35 As we will see, this standard for a patentable process is still vital today. n36

III. Icy Receptions: Criticism of the Business Method Exception

Several commentators have noted that the business method exception is ghostlike in nature, its apparition having been only in dicta in perhaps every case it was ever supposedly invoked. n37 Perhaps the most excoriating criticism is from the dissent of Judge Newman in In re Schrader. n38 So noteworthy is her dissent, it comprises the bulk of Professor Chisum's comments on business systems. n39 Judge Newman refers to the precedent, as did the Board of Patent Appeals and Interferences, as "inconclusive." n40 The concept itself is characterized as "fuzzy." n41 She also comes to the conclusion, "The cases simply reaffirm that the patent system is directed to tangible things and procedures, not mere ideas." n42

Lamenting the lack of precedent and the reliance on dicta, Judge Newman states:

[*412]

The decisions that have spoken of "methods of doing business" have, or could have, resolved the issue in each case simply by relying on the statutory requirements of patentability such as novelty and obviousness. An illustration is the CCPA's analysis in In re Howard, n43 wherein the court affirmed the Board of Appeals' rejection of the claims for lack of novelty, the court finding it unnecessary to reach the Board's section 101 ground that a method of doing business is "inherently unpatentable." n44

Noting that the focus on business methods as an exception is inapposite, she cites In re Patton. n45 The In re Patton court announced the familiar rule, "a system of transacting business, apart from the means for carrying out such a system, is not within the purview of . . . patentable subject matter." n46 A superficial glimpse might lead a reader to ignore the italicized part of the last sentence, "apart from the means for carrying out such a system," to come to the fallacious holding, "[A] system for transacting business [qualification deleted] . . . is not within the purview of [the statute], nor is an abstract idea or theory." This would suggest that the In re Patton court was divorcing mental ideas and steps from business systems and holding them both to be separate categories of unpatentable subject matter.

Like Hotel Security, the holding of In re Patton was that a system, any system - not just one for conducting business - was subject to the rule that only a system with an inventive physical means could be the proper subject of a patent. Judge Newman concludes in In re Schrader that the taxonomy of associating business methods with a statutory subject matter exception is gratuitous: "[T]he jurisprudence does not require the creation of a distinct class of business unpatentable subject matter." n47

Ultimately, the Schrader patent was not allowed. The patent was perhaps no more stellar in its inventiveness than the one in Hotel Security. The method was directed to auctions. Instead of auctioning off conjoining parcels of land (or other things that could be subdivided) individually or as a composite whole, a method was directed to ascertaining whether the price fetched as a whole was greater than the sum of prices bid for the individual subcomponents, and then selling in whatever way maximized profits. If Black Acre was divided into parcels A, B, and C; and if the total price for Black Acre as awhole exceeds the sum totals for A, B, and C; the whole of Black Acre was to be sold together.

[*413] Likewise, if the sum of the bids for A, B, and C exceeded that offered for Blackacre, the parcels would be sold as individual lots. n48

Though the majority of the In re Schrader court sang a song of algorithms, the chords were familiar:

The grouping or regrouping of bids cannot constitute a physical change, effect, or result. . . . The only physical effect or result which is required by the claims is entering bids in a "record," a step that can be accomplished simply by writing the bids on a piece of paper or a chalkboard. n49

A court yet again came to the conclusion that the physical means, not the mental steps of the system itself, must be the heart of the invention. The mental reactions and calculations of individuals were not considered a physical means.

IV. The Progeny of Hotel Security

The second case cited by the old MPEP

706.03 for the position that business methods are per se unpatentable is In re Wait. n50 The patent in In re Wait represented yet another equally unimpressive invention for a system. A price of a commodity was to be posted on a sign. A seller and buyer, located in different places were to be contacted through a "central point." When the seller and buyer consummated a transaction, the sign was removed and the transaction recorded at the central point. The court ruled that the claimed system was obvious. n51

As for being the first case to uphold the Hotel Security court's position that business systems are per se unpatentable, the Court of Customs and Patent Appeals merely stated that determining the validity of the doctrine was not relevant to the case. n52 The court considered it wise to "avoid dicta insofar as possible," n53 and explicitly avoided ruling on the integrity of the business method exception, much less uphold it.

The advent of drive-in theaters in the 1940's added to the case law on business methods. To this day, Loew's Drive-In Theatres Inc. v. Park-In Theatres, Inc. n54 is still cited as holding that business methods as a

[*414] group are unpatentable. n55 Drive-in theaters were proving to be a huge commercial success. The patent was for "a scheme for parking automobiles in an open lot" so that everyone could easily see the movie. n56 The lower court ruled that the patent was valid, being enamored by the novelty and widespread success of this new arrangement that was sweeping the country. n57 The First Circuit ruled that such analysis was incorrect. n58 The court, by "conced[ing] that a drive-in theater structure may be the subject matter of a patent," explicitly stated that the apparatus used in a business method may be patentable. n59 The court framed the issue as being "whether, given the idea or conception of an open-air drive- in theater, an exercise of the inventive faculty was required to devise the means for carrying it forward." n60 This was the old "physical-means-must-be-novel" test, not an application of a rule that business methods are per se unpatentable as non-statutory subject matter.

Rightly or wrongly, the Loew's Drive-In Theatres court held that there was no physical novelty, or if there was, the physical structure was obvious. n61 There was nothing new about a parking lot or theaters. So the court concluded, "This arcuate arrangement of parking stalls in a lot is obviously only an adaptation to automobiles of the conventional arrangement of seats in a theater employed since ancient times to enable patrons to see the performance . . . ." n62 There being no invention in the physical means, it was evident that the genius of the business was the intangible idea of having people watch movies from cars. This was no more patentable than having clowns at family restaurants or using jets to fly packages overnight. The final holding was, "a system for the transaction of business, such, for example, as the cafeteria system for transacting the restaurant business, . . . however novel, useful, or commercially successful is not patentable apart from the means for making the system practically useful. . . ." n63

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Where the physical means for carrying out a business method have been novel and inventive, patents have been upheld as within the purview of subject matter eligibility. In Rand, McNally & Co. v. Exchange Scrip-Book Co., n64 decided three years after Hotel Security, it was the passenger's coupon book itself, which expressed units of travel in terms of money as opposed to the usual mileage, that was upheld as patentable. In Cincinnati Traction Co. v. Pope n65 the invention was for a railroad coupon book with detachable stubs and places for which times for transfers could be indicated. In both cases it was argued, to no avail, that the inventions were mere business methods. Once it was determined that the physical means was novel, the fact that it was utilized in a business transaction was of no importance. The Rand, McNally court makes the distinction clear:

Nor do we think that this patented concept is nothing more than a business method. Its use is a part of a business method. The ticket patented is not a method at all, but a physical tangible facility, without which the method would have been impracticable, and with which it is practicable. And this is the status of thousands of like facilities that, once designed and put to use, have become the first of a new business method; and patents on such facilities have been sustained. n66

What greater evidence could exist than this quotation for the position that business methods may be the subject of a patent?

In re Wiechers n67 was one of the first cases that involved the patentability of a bank account. The claimed method was directed to a type of checking account. In addition to the usual checking account, the bank was to extend a predetermined line of credit based on the customer's credit history. Like many checking accounts, there were to be permissive overdrafts in which if the account went to zero, the bank would still honor the check and the customer would simply pay back the overdraft later. Instead of having to pay the bank back promptly, the customer could pay back in installments. The check was then to be treated like any other promissory note which the customer had to repay. As for the physical, nonhuman reaction, component of the systems, there was to be

[*416] a stamp with a "personalized notation" which identified the customer. The stamp was to be placed on the checks that were to be passed to the payee. This facilitated keeping track of the customer's account and was in the cited prior art reference.

Yet again, the case was decided by rejecting the patent application based on obviousness. n68 The court thought that therewas nothing new about stamp-bearing checks or installment payments. As in In re Wait, the majority did not rule on whether the method was unpatentable subject matter. The case is enigmatic, in one regard, nonetheless. By not summarily rejecting a method for setting up a bank account, which is essentially intangible in nature, it seemed to leave a doubt as to whether business methods, even ones comprising human steps, are unpatentable. The In re Wiechers court easily could have rejected the patent application for lack of proper subject matter if it had felt that human steps are not patentable. The court chose not to do so.

Even more cryptic is the dissent. Judge Smith remarks, "Initially, it should be made clear that what [the inventor] is claiming here is, beyond question, a method of doing business." n69 Rather than analyzing the history of the business method exception Judge Smith says flatly, "I agree with the majority that the issue of patentable subject matter under 35 U.S.C.

101 is not before us." n70 He would have the patent issue stating, "[The] appellant's claimed subject matter as a whole is a unique method of doing business which involves short-circuiting that marvel of modern-day society, the installment charge account, and its ubiquitous companion, the credit card." n71 Clearly, there is nothing tangible about a bank account other than paper money or paper checks. If anything, the dissent suggests that not only the physical means associated with accomplishing a method of business is patentable, but the mental steps, or human reactions, of keeping an account may be patentable as well! n72

A chance to clear the muddle came in In re Fox. n73 A method comprising mostly human steps was recited. Lectures were to be recorded and then transmitted to a distribution point such as a school library to be made available for public use. Upon bringing a blank tape, a copy of the

[*417] lecture could be made for a user. When the user was done listening with the tape, he could rerecord another lecture. Though this was a method comprising almost entirely mental steps - the physical means being almost irrelevant - the court yet again declined to discuss the non-statutory subject matter issue. n74

V. The Information Age

The advent of computers has brought the question of whether business methods should be patentable back into the forefront. But the themes seem to be the same. Determining if the physical means, not an underlying idea, is unique and inventive is still the center of concern. Another theme is equally prevalent: the courts have a proclivity to dispose of the case on grounds other than patentability of business methods.

In re Howard was such a case. n75 The patent related to technology that since has become essentially electronic bar coding for grocery stores. n76 Labels are put on items, the labels are electronically read as they are scanned by the cashier, and a "central converter" converts the code into a price and sends it back to the register. The physical apparatus was clearly statutory subject matter within the patent law and the claims directed to the apparatus were not the subject of the appeal. n77 In fact, the apparatus was not a necessary part of the method as the claimed comparison of the label with its corresponding price could be done electrically or any other way. n78

The court disposed of the method as not being unlike the "practice [that] relates back to the proverbial country merchant who has all but passed from the scene, but has his present-day counterpart in this context in the supermarket cashier who has a price list of advertised 'specials' taped to his register." n79 It was added, "Our affirmance of this ground of rejection makes it unnecessary to consider the issue of whether a method of doing business is inherently unpatentable." n80 The In re

[*418] Howard court seemed to suggest that while a method which is made up of steps of human mental participation (reading a list of prices to see how much lettuce costs this week) is not itself patentable, it may be nonetheless be patent-defeating prior art if the only inventive element of the method is to have a machine do that which was previously done by a human. n81 Interestingly enough, the concurring judge in In re Howard wanted to reject the claims for being directed to a business method. n82 After stating that the rule is "amply supported by authority," the absence of cases in support is conspicuous. n83

The Court of Customs and Patent Appeals had yet another chance to rule on the subject matter eligibility of computer-implemented business methods in In re Deutsch. n84 The method was directed to a central operating system of multi-unit manufacturing plants that were geographically remote from each other. By inputting various parameters such as demand, cost of production at particular locations, etc., the system could determine the optimal operating conditions of each facility. The court curiously avoided the business method issue by stating in a footnote, "That translation of business data into a mathematical language intelligible to computers is employed in carrying them out does not make a method of automatically controlling a system of manufacturing plants a method of 'doing business.'" n85 This would appear to take the world of plant or industrial operational management, normally associated with "business," out of the business method exception. Finding that no algorithm was being preempted from the public domain, the patent was allowed. n86

The appeal of In re Johnston n87 made it to the Supreme Court. The invention in that case was an automatic record-keeping system for financial services which employed a digital computer. In the prior art, checks and deposit slips were made machine readable. The claimed

[*419] invention developed a new system by using previously existing processing equipment incorporating the prior art. "The application containe[d] schematic block and flow diagrams of the entire apparatus including detailed descriptions of each diagram which set forth the interrelationships between all the disclosed elements of the apparatus." n88 A computer program was also included. n89

The court ruled that the system was within 35 U.S.C. 101 because "the appealed apparatus claims [were] not drawn to cover either a method of doing business or even a method of bookkeeping." n90 Since the claims were directed to apparatus and not to pure laws of nature, mathematical formulas or algorithms, they were permissible subject matter. n91 As was the case in Hotel Security nearly seventy years earlier, a patent was warranted because the physical means for carrying out the system was both novel and inventive. Faced with the objection of the Board of Patent Appeals and Interferences that others would not be allowed to offer similar routine bookkeeping services for individual accounts, the court explained that banks were free to perform the same financial transactions as long as they did not use the patented apparatus. n92 The appeal to the Supreme Court, Dann v. Johnston, n93 did not add to the body of law on business methods. The court reversed on the ground of obviousness. n94

The patent at issue in Paine, Webber, Jackson & Curtis, Inc. v. Merrill Lynch, Pierce, Fenner & Smith, Inc. n95 was for an apparatus composed of a computer supported by a computer program which Merrill Lynch used to provide financial services. n96 Paine Webber contended that the patent was invalid under 35 U.S.C. 101 because the claims "define nothing more than the combination of familiar business systems, that is, a margin brokerage account, one or more money market funds, and a checking/charge account, which have been connected together so that financial information can be exchanged among them." n97 Paine Webber

[*420] further contended that business methods and systems were not patentable, n98 and maintained that Merrill Lynch had attempted to cover up the fact that the invention was merely a business system by using means-plus-function language to give the appearance of structure. n99

The court held that it did not need to determine whether the claim was for an apparatus or a process "because labels are not determinative in a Section 101 analysis." n100 Moreover, it declined to look at the final product, that is the financial services that the invention provided. Rather, the court held that the focus should be "on the operation of the computer program and not on the product of the computer program." n101 The court said that the product of the claims of the patent effectuates "a highly useful business method and would be unpatentable if done by hand." n102 The fact that a computer and electricity were used added the physical means necessary for patentability.

Clearly, if the Paine Webber court had done anything different, it would have sent the law on methods back three centuries. Back then, the courts only considered the end product of all processes, not the processes themselves, and those courts would not consider a new method to be patentable if it did not result in a new end product. n103 The plaintiff, Paine Webber, made the argument, which was thought to be left in the dust of antiquity, that if you looked at the end product, and the end product was unpatentable, no patent should issue. Specifically, Paine Webber urged "the Court to focus on the product of the . . . patent claims, that is, the [financial] services the [computer-assisted business system] provides to the customers of Merrill Lynch rather than to focus on the method by which the [system] operates." n104 The court rejected Paine Webber's legal theory and because the physical means of the business system-the specific computer implementation-had the hallmarks of invention, Merrill Lynch's patent withstood Paine Webber's attack on subject matter eligibility. The rule of Paine Webber was that the invention

[*421] should be considered as a whole and examined for novel physical transformation.

It is difficult to determine whether the 1996 Examination Guidelines for Computer-Related Inventions n105 (hereinafter "Examination Guidelines" or "Guidelines") reflect the holding of Paine Webber. Under these Guidelines, the examiner is first to "determine what the applicant has invented" n106 by determining "what the programmed computer does when it performs the processes dictated by the software (i.e., the functionality of the programmed computer)." n107 This suggests that resulting function should be considered. Second, the examiner is to appraise "how the computer is to be configured to provide that functionality." n108 This suggests that the way the system functions rather than the result of its functioning is the governing factor.

The Paine Webber court held that better ways of accomplishing a task, at least if the improvements lie in the physical manifestation of the invention, are worth promoting by the extension of a monopoly in them. Notably, this court parted company with tradition when it gave little weight to the fact that the end product was the manipulation of data, rather than something physically tangible, which had been the traditional requirement. n109 So the court ruled that the inventive physical means to carry out the system belonged to the patentee. The intangible steps were irrevocably a part of the public domain for all to take.

When a patentee tries to deprive the world of the intangible steps of conducting business without the recitation of an inventive physical means, i.e., an apparatus or computer system, a patent will be denied. In a case before the Board of Patent Appeals and Interferences, Ex parte Murray, n110 the applicant attempted to secure a patent on a method of accounting requiring only the entering, sorting, debiting and totaling of expenditures. The Board found this subject matter to be "on its very face, a vivid example of the type of 'method of doing business' contemplated

[*422] by our review court as outside the protection of the patent statutes." n111 Moreover, the Board explained that "[w]hereas an apparatus or system capable of performing a business function may comprise patentable subject matter, a method of doing business generated by the apparatus or system is not." n112

One very recent district court decision upheld the business method exception. In State Street Bank & Trust Co. v. Signature Financial Group, Inc., n113 a patent was sought for a computerized accounting system for managing mutual funds called a "Hub and Spoke" configuration. State Street Bank wanted a declaratory judgment that Signature Financial had no valid patent. The court characterized Signature's system as "a Hub and spoke arrangement [which] is an investment structure whereby mutual funds ('Spokes') pool their assets in an investment portfolio ('Hub') organized as a partnership . . . 'for federal income tax purposes and that holds the investment portfolio.'" n114 Such an arrangement also provides economies of scale to the member mutual funds with respect to administrative costs. n115

This arrangement required the Hub to measure the successes and losses of its investment portfolio and to distribute them pro rata to the Spoke funds. n116 The problem was that the Spoke funds were always changing in size, making it difficult to determine who held what investments at any given time and, as a consequence, it was difficult to know what dividends were owed to which investors. n117

The system that Signature Financial wanted to patent was set up to solve these problems by, inter alia, determining "the percentage share that each Spoke fund [held] in the Hub portfolio," n118 tracking "any daily activity affecting the portfolio's assets," n119 and allocating "gains, losses and expenses to each of the Spoke member funds." n120 The court, ruling on a motion for summary judgment, framed the key question in the case as "whether computer software that essentially performs mathematical

[*423] accounting functions and is configured to run on a general purpose (i.e., personal) computer is patentable under 35 U.S.C.

101." n121 The majority of the decision is directed to algorithms. The State Street Bank court once again invoked the business method exception but, interestingly, the only authorities it cited for this rule are treatises; n122 the two cases it cited, Loew's Drive-In Theatres and Hotel Security, as discussed, do not support this rule.

The concern of the court was that the claims, as written, were broad enough "to foreclose virtually any computer-implemented accounting method necessary to manage this type of financial structure." n123 Although it was articulated in a section entitled "The Business Methods Exception," n124 the court's reluctance to preempt a type of calculation was reminiscent of the fear that algorithms should not be removed from the public domain for others to use. In fact, the court discussed, at length, the proposition that ideas are not patentable. n125 While the court appeared to hold that that business methods per se are unpatentable, the real basis for its decision was the old rule that the genius of an invention must be in the physical means rather than intangible transactions.

It will be interesting to see how the Federal Circuit rules on the appeal. n126 Can it possibly be that a device for transforming numerical values into smooth waveform data displayed on an oscilloscope n127 and a method for measuring, processing, and displaying heart activity on a screen n128 are patentable while a method for "monitoring and recording the information flow and data, and making all calculations necessary for maintaining a . . . [financial services] configuration" n129 is not? What functional differences distinguish the systems in Alappat and Arrhythmia

[*424] Research from the system in State Street Bank? In all three systems, data are collected, processed, and displayed on a screen.

In Alappat, the necessary physical transformation was an output display. While mathematical operations were performed on a computer, the fact that processed information was displayed in the form of "discrete waveform data samples [converted] into anti-aliased [smoothed out] pixel illumination intensity data to be displayed on a display means" n130 satisfied the physical-means-must-be-novel test (sometimes, as of late, called the physical transformation test). In Arrhythmia Research, the physical transformation was the measurement of microvolts of a specified heart activity displayed on a screen. The court held that the "claimed steps of 'converting,' 'applying,' 'determining' and 'comparing' are physical process steps that transform one physical, electrical signal into another." n131 The holdings in Alappat and Arrhythmia Research make one wonder why the systems in State Street Bank for "assess[ing]," n132 "calculat[ing]," n133 "allocat[ing]," n134 "determin[ing]," n135 and "tracking" n136 "data regarding assets in the portfolio and each of the funds from a previous day and data regarding increases or decreases in each of the funds" n137 to determine "daily incremental net income, expenses, and net realized gain or loss" n138 would not be patentable as well? The systems at issue in all three cases manipulate electrical signal input, in a way that may be described mathematically, to produce an output electrical signal that is displayed and is of practical use.

Can it be that the rule that distinguishes Alappat and Arrhythmia Research from State Street Bank is that computer-implemented data systems are patentable when the data they produce are used in science but are not patentable when the data they produce are used in business? Such a rule exalts form over substance. It obsesses with the adherence to a recognized taxonomy and pays no heed to the aim and purpose of patent law. According to the PTO, this may be the sad state of affairs. Claims relating to business systems rarely, if ever, refer to specific program code but rather describe a flow chart of abstract steps to be taken. In the

[*425] Examination Guidelines, a patent claim that uses computer programs but does not list the specific software to be used must be analyzed as a process claim. n139 The rationale for this is that if software code were given, the disclosure would identify the specific machine capable of performing the indicated functions of the software. n140 This, in turn, would allow for the application of the physical-means-must-be-novel test because there is something physically concrete to consider. One can examine the general purpose computer turning into a specific purpose computer (through the use of software) to determine whether it is inventive. But when there is no definite computer software given, i.e., there are only means-plus- function claims with no corresponding specific code in the specification, "patentability stands or falls with [the] process claim." n141 This is because nothing is revealed about physically implementing the invention-thus making the application of the physical-means-must-be-novel test impossible-and all that is left to analyze is the underlying process itself. n142

If a business system is described as having no specific computer code, calamity may result. As to ruling on a computer-implemented invention being a process claim the Guidelines state:

To be statutory, a claimed computer-related process must either: (1) Result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification [or would have been obvious] or (2) be limited by the language in the claim to be practical application within the technological arts. n143

In footnote forty of the Examination Guidelines, n144 The PTO cites Alappat in support of this rule (demanding a technical application of a computer- related implemented invention), but this case does not support the rule for which the PTO cites it. The Alappat court stated that "certain types of mathematical subject matter, standing alone, represent nothing more than abstract ideas until reduced to some type of practical application, and thus that subject matter is not, in and of itself, entitled to patent protection." n145 The concurrence by Judge Newman, which cited

[*426] O'Reilly v. Morse, n146 noted that "the unpatentability of the principle does not defeat patentability of its practical applications." n147

While it is clear that Alappat calls for a practical application of what would otherwise be purely mathematical subject matter, it makes no suggestion that the practical application must pertain to the technical arts. In fact, quite the opposite is suggested. The spirit of the cited passages conveys a liberal interpretation of 35 U.S.C.

101, teaching that the mere sight of mathematics in a patent claim should not render an invention unpatentable. Just sentences before the passages from Alappat cited by the PTO, the court cited, with approval, the proposition that patents are to be awarded to "anything under the sun that is made by man." n148 This principle was stated earlier in Diamond v. Chakrabarty, n149 which echoed, verbatim, sentiments expressed in the halls of Congress. n150 As Judge Rader of the Federal Circuit noted in his concurrence in Arrhythmia Research, 35 U.S.C.

101 "conveys no implication that the [Patent] Act extends patent protection to some subcategories of machines or processes and not to others." n151

At any rate, if the courts rule that the PTO is correct, since most computer-implemented business systems do not contain specific software code and would thereby be evaluated as processes, and since processes must have technological applications, the simple syllogistic conclusion is that most computer-implemented business systems are unpatentable. It may be concluded that while the business method exception has been eliminated, the Guidelines have been written in such a way that most computer-implemented business systems will be deemed unpatentable regardless. The PTO did create a "Safe Harbor" n152 for "Post-Computer Process Activity" n153 that may save an otherwise unpatentable computer-implemented process claim that does not contain specific software code,

[*427] but business systems need not apply. Under the Guidelines, "[a] process is statutory if it requires physical acts to be performed outside the computer independent of and following the steps to be performed by a programmed computer, where those acts involve the manipulat[ion] of tangible physical objects and result in the object having a different physical attribute or structure." n154 Since few, if any, business systems manipulate tangible objects, they are left drowning, hoping for jurisprudential rescue by the Federal Circuit.

If a practitioner has a computer-implemented business system, it would be wise for him or her to state a specific code in the specification so that the system may be considered an apparatus. This would have the obvious undesirable effect of limiting the scope of the claim to that set of specific code or its equivalent. To this, many would say that this is precisely the result that the courts are hoping to achieve. Alternatively, if one desires to include no code in the specification, a "practical application" internal to the computer that makes the computer work better may make the computer- implemented business system patentable. Most business systems simply do not have this characteristic and their inventors do not seek patents on improved computers. As a final resort, some have suggested that indicating an output display in the specification may make a computer-implemented business system patentable as either a "practical application" or a "physical manipulation" of a tangible object. This strategy is risky at best, and the courts may well reject it.

VI. The Conundrum of Patentable Subject Matter

The determination of what subject matter is properly patentable is significantly complicated by the fact that subject matter eligibility does not form a neat dichotomy but rather spreads across a spectrum. n155 For instance, naturally occurring objects, such as a shrimp, are not patentable. Simply altering the object in a slight way, perhaps by peeling it, will not render it patentable as a manmade invention. n156 Putting the shrimp into an exotic new recipe may, however, render the shrimp patentable. Human beings extract from the earth all manner of elements-animal,

[*428] vegetable, and mineral-and through the application of various forces, we transform these elements into the wide range of objects we use to live our lives. There must be a point, as a raw element continues down the path of human manipulation and transformation into objecthood, where reasonable people can differ as to whether that material is the proper subject of a patent.

While, as previously noted, patent law is most at ease when granting monopolies over unique new physical substances, we began granting patents for ideas as soon as we started granting patents for processes. This is true despite constant reminders from the bench that ideas are not patentable. Professor Robinson said years ago that a process is patentable, eventhough it is in essence intangible. A process requires that "'certain things should be done with certain substances in a certain order.' It is so far abstract that it is capable of contemplation by the mind apart from any one of the specific instruments by which it is performed . . . [and it can] become apparent to the senses only in connection with some tangible instrument and object." n157 ne may not, after all, put his or her hands on a series of steps and show it to others.So the process is independent of the apparatus and instruments used to accomplish it. And while it might seem as if the physical-means-must-be-novel rule somehow undoes this fact, such is not the case. Whereas the existence of a process implies the existence of an interesting physical transformation of matter, the patentable subject matter is the idea of the series of steps in the process, not the matter, the force, or the physical change. The requirement that there must be some physical effect allows us to patent a process for tanning leather but not the rules of trigonometry. This, in turn, is economically useful; while we want to encourage new methods of tanning leather with the economic incentive of a monopoly, we want to keep trigonometry in the public domain because it is a building block for legions of future inventions. The Examination Guidelines further this objective by alerting examiners to the fact that "[c]ourts have expressed a concern over 'preemption' of ideas, laws of nature or natural phenomena." n158 This preemption doctrine was articulated as long ago as 1852, when the Supreme Court held that "[a] principle, in the abstract, is a fundamental truth; an original cause; a

[*429] motive; these cannot be patented, as no one can claim in either of them an exclusive right." n159 As more and more business systems are implemented by computers, perhaps we should not be discomforted by the fact that patent applications for these systems will tend, increasingly, to claim ideas. n160 the subject matter of all process claims are ideas, so we would not be setting sail on completely uncharted waters, but admittedly, at least some of the reefs have yet to be discovered. As well, while a computer program may be an idea, it is not an "abstract idea" like the law of gravity. Rather, like all step-by-step methods, any computer program is directed to a particular material manifestation. Even "abstract" software (that is, the abstract ideas of the software rather than the literal code), while not limited to a particular set of ones and zeros, must be implemented physically with some set of ones and zeros represented by circuitry and electricity. While the exact code may not be set, patent law has never required that a claim must have an exact, invariant embodiment before it can be patented. Furthermore, "abstract" software is not nearly as "abstract" as the fact discovered by Samuel Morse that electricity can be used as a mode of communication. Abstract software is more akin to the use of the physical law that Morse discovered to create the telegraph. n161

One thing is certain: had the early courts not come to their senses and overcome the physical/ideal hurdle, the method claim as we know it would not exist today, and we would be much worse off without it. Unfortunately, the physical/ideal conundrum and the mixing of the unpatentable with the patentable haunts the courts once again with the advent of the computer and its use in business systems. The historical requirement that there must be an inventive physical means is the core problem with the computer-implemented business system as it is regarded by patent law. As there was a point where the natural object met the article of manufacture as the shrimp became more and more processed, in a computer we have the confluence of ideas and the tangible. At the most rudimentary level of Boolean algebra we have an idea, the "and" function. The "and" function can be represented by two transistors connected in series. If both transistors are activated there will be an

[*430] electrical output. The concept of the Boolean "or" function is embodied with two transistors connected in parallel. If either one of the transistors is activated there will be a signal. Clearly there is some physical transformation as with all subject-matter-eligible processes. As was stated in Arrhythmia Research, even an output signal is physical. n162

While obviously Boolean algebra is an idea and the transistors are physical, a new problem exists that had not existed before. Suppose the millions of gates are connected in a new and ingenious way to produce a useful result. The brilliance of the ultimate algorithm is in the physical means needed to accomplish that algorithm. The idea has become "reified" in the physical; it has taken a physical manifestation, and we don't know quite what to do. The PTO's instructions to examiners to "determine what, precisely, the applicant has invented and is seeking to patent" are not helpful. n163

As the Greeks could not arrive at calculus because of Zeno's paradox, the physical/ideal conundrum has arrested the development of a definite body of subject matter law. Is the ingeniousness of the invention the final Boolean logic, or the physical arrangement of the transistors? Do we have a brilliant new idea or a brilliant new thing? If the invention is the former, we have an unpatentable process, because the ingeniousness is in the idea. If the invention is the later, the physical means is novel and imaginative and a process patent may issue. By applying the old business method rule to the modern computer we face the overwhelming dilemma of determining whether or not the inventor has created an inventive physical means. n164 One may look to the Examination Guidelines for direction, but some commentators suggest that the new guidelines do not add clarity. The use of abstract software in a claim has proven to be particularly perplexing. Professor Stern observes that "[t]he Software Guidelines are Delphic, and leave many critical issues

[*431] unresolved. It will not be clear for a long time what kind of software abstraction patents the PTO will allow." n165 This is especially daunting. Much, if not most, of the value of a computer-implemented business system, or of any other computer program, lies in its abstract aspects rather than in its literal code. n166

It is well recognized that almost any function in a computer can be done by either hardware or software; an algorithm may be executed through a computer program or through hard-wired circuitry. Since the hardware is patentable, the argument goes, so too should the software be patentable. n167 Paradoxically, this argument may be both powerful and, on the other hand, irrelevant. While a purist may argue that software is just an idea, and may be technically correct, it is a practical necessity that software must exist in some physical state if it is to have any utility. In terms of being a useful inventive entity, software is as physically real as hardware. Instead of the physical matter of what is typically called "hardware," we have the physical matter of RAM, a computer diskette, or the old-fashion punch-card.

While this may be interesting to philosophers, the practitioner is frustrated as to what he or she may or may not claim. The PTO is aware of the fact that there may be no meaningful distinction between hardware and software. The Examination Guidelines state that computer-related inventions should be treated "in the same manner as inventions in other technologies to avoid creation of an artificial distinction between hardware-implemented and software-implemented inventions." n168 The Guidelines further state that "[t]he discrete physical structures [of the computer- implemented invention] may be comprised of hardware or a combination of hardware and software." n169

Some have suggested that the preference, if not the demand, to produce a recitation of physical structure has created a new type of claim drafting. In the fluster to make computer- implemented business systems concrete, practitioners have developed a new approach. Instead of claiming step one of an algorithm (determining A) and step two of the algorithm (adding it to B), claimants are claiming a means for accomplishing step one and a means for accomplishing step two. n170 This means-plus-function

[*432] language gives the appearance of physical apparatus. n171 This technique was also used in State Street Bank where instead of storing data and initializing the storage medium, a "storage means for storing data" and a "first means for initializing the storage medium" were recited in the claims. n172 In compliance with In re Donaldson Co., n173 the Guidelines state that "[w]here means plus function language is used to define the characteristics of a machine or manufacture invention, claim limitations must be interpreted to read on only the structures or materials disclosed in the specification and 'equivalents thereof.'" n174 Of course, in an effort to have a broad claim, one may try to prevent restricting the means- plus-function language of the claims by being nonspecific in the specification as to the particulars of how the means is to be accomplished. As stated in Donaldson, this may lead to other concerns:

> if one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112. n175

It must therefore be assumed that if means-plus-function language is employed, there is an "adequate disclosure." "Adequate" would seem to imply at least something. Nonetheless, post-Donaldson courts have said:

> The use of means-plus-function language results in construction of the claim as an apparatus (i.e., machine) rather than a method (i.e., process), even if no discrete devices or structures are described in the claim itself. n176

[*433] But what if this "adequate" disclosure is general rather than specific? The Examination Guidelines, as noted earlier, explain that if no specific software or logic circuits are given, the claims encompass any computer embodiment. The Guidelines then call for claims for computer- implemented systems to be treated as processes if "[t]he disclosure does not have specific disclosure that corresponds to the . . . 'means' limitations." n177

This causes a dilemma. One may want to seek patent protection for the abstract steps of a computer-implemented business system rather than for the actual code so that the underlying algorithm cannot be performed on any general computer with equivalent specific programming code that can accomplish the underlying algorithm. But by eliminating allusions to specific code, for reasons discussed previously, the business system claim will be treated as a process claim; the process will not relate to the technological arts, and a patent will not issue. This result, however, may be intended. In State Street Bank, the court made a preemption argument rejecting Signature's business system, noting that Signature's

[p]atent is claimed sufficiently broadly to foreclose virtually any computer-implemented accounting method necessary to manage this type of financial structure. . . . In effect, the [p]atent grants Signature a monopoly on its idea of a multi-tiered partnership portfolio investment structure; patenting an accounting system necessary to carry on a certain type of business is tantamount to a patent on the business itself. n178

Of course, the very purpose of a patent is to prevent others from engaging in the activity for which an invention was created. By viewing the abstract software of a business system as an algorithm and not an "invention," many computer-implemented business systems will not be deemed to be proper, patentable subject matter.

The ultimate rule for deciding which business systems will be patentable subject matter may arise not from a resolution of the physical/ideal conundrum, but rather, from a determination of what is economically useful. Conceivably, this just replaces one difficult problem with another. If we do not allow a patent on a computer program, the underlying algorithm will be free for all to use. The Benson court seemed to think it was best to leave the algorithm for converting binary-coded decimal into binary in the public domain. However, the whole of the patent system reveals that while invention may occur without patent

[*434] laws, granting monopolies in an invention creates substantial economic incentives, thereby greatly increasing the amount of inventive activity. The method of converting binary-coded decimal into binary was given over for use by all, but the incentive to find the next great algorithm may have been diminished. And we simply do not know whether it is better to have fewer known algorithms accessible to all, or to have a larger number of algorithms that are restricted by monopolies.

The nature of business exacerbates the problem. The principal function of today's business systems, as illustrated by State Street Bank, is number crunching. While all computer programs, as step-by-step functions, are algorithmic, the manipulation of numbers transforms these computer algorithms into mathematical algorithms, the bane of contemporary law. For instance, the court in In re Maucorps, n179 disallowed a claim that was directed to "a computer-implemented model of a sales organization. [The system] determines the optimum number of times a sales representative for a business should visit each customer over a period of time, the optimum number of sales representatives the organization should have, and the optimum organization of sales representatives." n180 Because business systems rely heavily on mathematics, the future development of the law related to computer-implemented business systems may closely track developments in mathematical algorithmic case law in general. Further complicating the abjectly complicated, the degree to which a computer algorithm is mathematical lies on a spectrum about which reasonable people can disagree. Many commentators have noted that all computer programs have at least some mathematical content since all computer programs manipulate ones and zeros.

Those on the bench who are hostile to the patentability of computer-implemented business systems can cite the nineteenth-century case of United States Credit System Co. v. American Credit Indemnity Co., n181 for the proposition that accounting, or other mathematical analyses performed on business data may not be patentable. Implicit in this proposition is the premise that if all that is ingenious in a patent claim is the idea, not the physical means, a patent is not permitted. According to this line or reasoning, the computer is the jurisprudential equivalent of a paper and pencil. But this may not be fair. A computer computes; pencils and paper do not. Software simply transforms the general

[*435] purpose computer into a specific purpose computer, n182 a transformation not unlike the physical "retooling" of an old mechanical cashier to perform a customized function.

Those, on the other hand, who are friendly to the idea that computer-implemented systems are patentable, may try to sever the mathematical algorithm from the rest, as was done in Paine Webber:

> if a computer program is viewed as a series of thought processes, then it merely consists of mental steps which is nonstatutory subject matter and not patentable. This view has not been accepted and computer programs are recognized as being patentable. . . . Although one may devise a computer algorithm for the Pythagorean theorem, it is the step-by-step process which instructs the computer to solve the theorem which is the algorithm, rather than the theorem itself. . . . [A] computer algorithm, as opposed to a mathematical algorithm, is patentable subject matter. n183

As things stand today, a court could follow Alappat and consider the output of a computer implemented business system to be a "useful, concrete, and tangible result." n184 Or that same court could regard the same subject matter as nothing more than electronic bean- counting that is utterly without merit from the perspective of patent law. The appeal of State Street Bank, now before the Federal Circuit, will provide the ultimate conclusion.

VII.Conclusion

On the basis of the foregoing analysis, it is clear that the "business method exception" is now and has always been a chimera. By examining the fabric of the case law, we see the true nature of the Emperor's clothes. The resplendid robe of a business method statutory exception, though seen by academics and practitioners, is a robe without substance. It is time to note this. The so-called "business method" cases, without exception, have been decided on grounds other than subject matter eligibility such as novelty, definiteness or obviousness. When the rule has been properly invoked, it was only to reaffirm that without an inventive physical means, a process will not be awarded a patent, no

[*436] matter how ingenious the method - an observation made long ago by Professor Robinson. This venerable rule is the proper focus of attention.

The patent law today, just like its ancestors two centuries ago, chiefly concerns itself with the tangible forces of nature, matter and energy. The question should not be, "Is this a business method?" but rather, "What is physically different about the process?" What is "physically different" should be liberally construed to include all computer programs, although proposals to have computer programs become per se statutory were rejected in the Examination Guidelines. n185 As the Guidelines concede, "there is always some form of physical transformation within a computer because a computer acts on signals and transforms them during its operation and changes the state of its components during the execution of a process." n186 Per se allowability of computer programs would have the threefold advantage of: (1) being economically useful because there would be more incentive to produce computer programs because there would be more certainty that patent law would establish and protect property rights in computer programs; n187 (2) laying down a clearly articulated, "bright-line" principal upon which future conduct may be reliably based; and (3) serving, as does the "moral rights" theory of copyrights, the equitable interest of rewarding the efforts of creative individuals. n188 As to processes, the term "business method exception" should be excised from the patent law lexicon and put out to pasture with "vendible substance." It serves no useful analytic purpose.

In his practice, the author has encountered several instances whereby individuals who have computer software related to a business system have opted to maintain their software as trade secrets; the grant of a patent to the code is too parsimonious while the grant of a patent to the algorithmic solution is too uncertain. If it is object of patent law to encourage the revelation of valuable ideas through the patent system, the approach taken by the district court in State Street Bank is unsound. To reward the creator is to foster creation. To fail to provide recompense for public disclosure compels the creator to hide the fruits of his imagination in the vaults of trade secret protection, never to be broadcast for the benefit of all.

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Though not constituting substantive rule making on the part of the Patent and Trademark Office, and therefore not having the force and effect of law, the recent Examination Guidelines state:

Office personnel have had difficulty in properly treating claims directed to methods of doing business. Claims should not be categorized as methods of doing business. Instead, such claims should be treated like any other process claims. n189

It looks like we are off to a good start.

n1 Hans Christian Andersen, The Emperor's New Clothes, in The Complete Fairy Tales and Stories 81 (Erik Christian Haugaard trans., 1974).

n2 Manual of Patent Examining Procedure 706.03(a) (August 1993).

n3 *O'Reilly v. Morse, 56 U.S. 62 (1853).*

n4 *Rubber-Tip Pencil Co. v. Howard, 87 U.S. 498 (1874).*

n5 *Gottschalk v. Benson, 409 U.S. 63, 175 U.S.P.Q. (BNA) 673 (1972).*

n6 1 William C. Robinson, THE LAW OF PATENTS FOR USEFUL INVENTIONS 160 (1890).

n7 Id.

n8 *Id. at 160* and cited cases (emphasis added).

n9 *Boulton and Watt v. Bull (1795), 2 H.Bl. 463.*

n10 Robinson at 160 n.1.

n11 Id.

n12 Professor Robinson characterized the exclusion of processes as patentable as an error "too momentous to allow . . . to remain long uncorrected." Id. at 162.

n13 *160 F. 467 (2nd Cir. 1908).*

n14 For instance, in *United States Credit System Co. v. American Indemnity Co., 53 F. 818 (C.C.S.D.N.Y. 1893),* a means for insuring a bad debt was found invalid for lack of novelty. In Ex parte Abraham, 1869 C.D. 59, it was held, "it is contrary to the spirit of the patent law construed by the Office for years, to grant patents for methods or analogous systems of bookkeeping."

n15 *Hotel Security, 160 F. at 467.*

n16 *Id. at 469.*

n17 *Id. at 472* (emphasis added).

n18 U.S. Comp. St. 1901, p. 3882 (emphasis added.)

n19 Patent Act of 1793, Ch. 11, 1 Stat. 318-323 (Feb. 21, 1793) quoted in 1 Donald S. Chisum, PATENTS App. 10-1 (1995). Under the first United States Patent Statute, the eligible subject matter was "any useful art, manufacture, engine, machine, or device." Patent Act of 1793, Ch. 7, 1 Stat. 109-112 (Apr. 10, 1790).

n20 *35 U.S.C. 101.*

n21 *Hotel Security, 160 F. at 469* (emphasis added).

n22 Id. (emphasis added.)

n23 The term "algorithm" is used in the usual context of a mathematical algorithm, especially one used in a computer program. The Federal Circuit has been noted that "any step-by-step process, whether mechanical, electrical, biological or chemical, involves an 'algorithm' in the broader sense of the term." *Arrhythmia Research Technology, Inc. v. Corazonix Corporation, 958 F.2d 1053, 1056 n.3 (Fed. Cir. 1992).* Under this more liberal view, a business system or method would be an algorithm.

n24 Professor Chisum notes, "The patentee's method did not appear to so abstract, and the balance of the court's opinion appears to rest on the lack of novelty or invention in the system." 1 Donald S. Chisum, PATENTS 1.03[5] (1995). Perhaps by "abstract" the court meant "having qualities apart from any objects" as opposed to "difficult to understand." Such an interpretation would add further credence to the proposal that the Hotel Security court was enunciating the "physical effects" rule.

n25 *Hotel Security, 160 F. at 469* (citations omitted).

n26 *Id. at 472.*

n27 For instance, Professor Chisum states "The decisions hold that business 'plans' and 'systems' are not patentable, even though they may not be dependent upon the . . . judgmental reactions of a human." 1 Donald S. Chisum, PATENTS 1.03[5] (1995) (emphasis added). "Whereas an apparatus or system capable of performing a business function constitutes statutory subject matter, the law remains that a method of doing business, whether or not generated by an apparatus or system, does not constitute statutory subject matter." Peter D. Rosenberg, PATENT LAW FUNDAMENTALS 6.02[3][b] (2nd Ed. 11/97) (emphasis added). It is not always entirely clear what is being patented - a process or an apparatus. See Judge Bull's opinion in *Boulton and Watt v. Bull, supra* note 9, in which the judge discussed whether previous patents were directed to an apparatus used in a process or to the process itself. The older treatises do not make this non-distinction between ideas and physical apparatus or physical steps. They take effort to note that it is only when the idea or mental steps constitute the inventive element that a patent will not issue. As one authority notes, "As instances of the non- patentability of ideas, mention may be made of the various systems of doing business, such as modes of bookkeeping and hotel checking systems." Ernest Bainbridge Lipscomb III, LIPSCOMB'S WALKER ON PATENTS 2:17 (1984) (emphasis added).

n28 Robinson at 159.

n29 *94 U.S. 780, 788 (1876)* (J. Bradley).

n30 Robinson at 159 n.1.

n31 The term "process" is defined by *35 U.S.C. 100:* "The term process means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material." While shedding light on the rule that a new use is patentable, in defining the word "process" the statute has been criticized for being patently circular. A "process" is defined as a "process." The fact that the terms "art" and "method" are each considered to be a "process" implies that pre-1952 case law defining "art" and "method" are still germane.

n32 *59 F. 139 (2nd. Cir. 1893).*

n33 *Hotel Security, 160 F. at 472* (emphasis added).

n34 Robinson at 166. Robinson's treatise offers a brilliant expedition into the meaning, nature, and philosophy of "art" as used in the Patent Law. See, e.g., 165 et seq.

n35 Id.

n36 But see Geo. E. Tew, Method of Doing Business, *16 J. PAT. OFF. SOC'Y 607 (Aug. 1934)* where it was stated that had the inventor "really invented a method of simultaneous double entry bookkeeping he would be entitled to the protection of the invention, but having merely invented a machine by which such a result is obtained he is not entitled to a monopoly of more than one machine." *Id. at 608* (quoting In re Tallmadge, 1912 C.D. 434 (Comm'r. Pat. 1912)).

n37 See E. Robert Yoches and Howard G. Pollack, Is the "Method of Doing Business" Rejection Bankrupt? 3 Fed. Cir. B.J. 73 (Spring 1993). In an article published by The Patent Office Society more than twenty-five years after Hotel Security, the author notes, "It is probably settled by long practice and many precedents that 'methods of doing business,' as these words are generally understood, are unpatentable, notwithstanding the absence in decided cases of any logical or statutory reason or rule why they are unpatentable." Geo. E. Tew, Method of Doing Business, *16 J. PAT. OFF. SOC'Y 607, 607 (Aug. 1934).*

n38 *22 F.3d 290, 296-99, 30 U.S.P.Q.2d (BNA) 1455, 1460-162 (Fed. Cir. 1994)* (dissenting opinion).

n39 Chisum, at 1.03[5].

n40 *In re Schrader, 22 F.3d at 298, 30 U.S.P.Q.2d (BNA) at 1461.*

n41 Id.

n42 *Id., 30 U.S.P.Q.2d at 1462* (citing *Rubber-Tip Pencil Co. v. Howard, 87 U.S. 498, 507 (1874)* "An idea of itself is not patentable, but a new device by which it may be made practically useful is.").

n43 *394 F.2d 869, 157 U.S.P.Q. (BNA) 615 (C.C.P.A. 1968).* See supra note 75.

n44 *Schrader, 22 F.3d at 298, 30 U.S.P.Q.2d at 1462.*

n45 *127 F.2d 324, 53 U.S.P.Q. (BNA) 376 (C.C.P.A. 1942).*

n46 *Id. at 327, 53 U.S.P.Q. at 379* (emphasis added).

n47 *Shrader, 22 F.3d at 298, 30 U.S.P.Q.2d at 1462.*

n48 *Id. at 291, 30 U.S.P.Q.2d at 1456.*

n49 *Id. at 294, 30 U.S.P.Q.2d at 1458.*

n50 *73 F.2d 982, 24 U.S.P.Q. (BNA) 88 (C.C.P.A. 1934).*

n51 *Id. at 983, 24 U.S.P.Q. at 89.*

n52 *Id. at 982, 24 U.S.P.Q. at 88.*

n53 Id.

n54 *174 F.2d 547, 81 U.S.P.Q. (BNA) 149 (1st. Cir. 1949).*

n55 *State Street Bank and Trust Co. v. Signature Financial Group Inc., 927 F. Supp. 502, 515, 38 U.S.P.Q.2d (BNA) 1530, 1542 (D. Mass. 1996).*

n56 *Loew's Drive-In Theatres, 174 F.2d at 550, 81 U.S.P.Q. at 152.*

n57 *Id. at 552, 81 U.S.P.Q. at 153.*

n58 Id.

n59 *Id. at 551, 81 U.S.P.Q. at 153.*

n60 Id. (emphasis added).

n61 *Id. at 553, 81 U.S.P.Q. at 154-5.*

n62 *Id. at 552, 81 U.S.P.Q. at 153-4.*

n63 *Id., 81 U.S.P.Q. at 153.* As stated earlier, it may be difficult to determine whether a patent is directed to a method or an apparatus since both situations require inventive activity that has a physical nexus. A spirited debate could be had over whether the patent at issue was a method of doing business in which the physical means to accomplish that method was not inventive, or whether the patent was directed to the physical structure of an arcuate parking lot with a movie screen at the front. See supra note 27.

n64 *187 F. 984 (7th Cir. 1911).*

n65 *210 F. 443 (6th Cir. 1913).*

n66 *Rand, McNally & Co., 187 F. at 986* (emphasis added). The 1934 article by Geo. E. Tew in the Journal of the Patent Office Society reduces the difference down to size: "A distinction may probably be drawn between a method of doing business and a method used in doing business . . . ." Tew, supra note 36 at 608.

n67 *347 F.2d 608, 146 U.S.P.Q. (BNA) 52 (C.C.P.A. 1965).*

n68 *Id. at 611, 146 U.S.P.Q. at 54.*

n69 Id. (dissent).

n70 Id.

n71 *Id., 146 U.S.P.Q. at 55* (emphasis added).

n72 See supra note 36, discussing In re Tallmadge, 1912 C.D. 434 (Comm'r. Pat. 1912), which, in dicta, suggests that the mental steps of a method are patentable. The

reader should note the mental-steps-as-patentable holdings appear to be only in dissents and/or are dicta.

n73 *471 F.2d 1405, 176 U.S.P.Q. (BNA) 340 (C.C.P.A. 1973).*

n74 *Id. at 1406, 176 U.S.P.Q. at 341.*

n75 *394 F.2d 869, 157 U.S.P.Q. (BNA) 615 (C.C.P.A. 1968).* This case is interesting in that not a single case is cited in the entirety of the opinion.

n76 Instead of bar codes being read, alpha or numeric forms could be read. *Id. at 870, 157 U.S.P.Q. at 616.*

n77 *Id. at 871, 157 U.S.P.Q. at 617.*

n78 *Id. at 870-1, 157 U.S.P.Q. at 616.*

n79 Id.

n80 *Id. at 872, 157 U.S.P.Q. at 617.*

n81 A statement in *Paine, Webber, Jackson & Curtis, Inc. v. Merrill Lynch, Pierce, Fenner & Smith, Inc., 564 F. Supp. 1358, 1369, 218 U.S.P.Q. (BNA) 212, 220 (D. Del. 1983)* rejects this proposition: "The product of the claims of [the patent] effectuate a highly useful business method and would be unpatentable if done by hand." Id. This seems to suggest that if a computer does simply what was once done by a human, it still may be subject matter eligible.

n82 *In re Howard, 394 F.2d at 872, 157 U.S.P.Q. (BNA) at 617.*

n83 Id.

n84 *553 F.2d 689, 193 U.S.P.Q. (BNA) 645 (C.C.P.A. 1977).*

n85 *Id. at 692 n.5, 193 U.S.P.Q. at 648 n.5.*

n86 *Id. at 693, 193 U.S.P.Q. at 649.*

n87 *In re Johnston, 502 F.2d 765, 183 U.S.P.Q. (BNA) 172 (CCPA 1974),* rev'd on other grounds, *Dann v. Johnson, 425 U.S. 219, 189 U.S.P.Q. (BNA) 257 (1976).*

n88 Id. at 767, 183 U.S.P.Q. at 172.

n89 Id.

n90 Id. at 771, 183 U.S.P.Q. at 177.

n91 Id.

n92 Id.

n93 *425 U.S. 219, 189 U.S.P.Q. (BNA) 257 (1976).*

n94 *Id. at 220, 189 U.S.P.Q at 258.*

n95 *Paine, Webber, Jackson & Curtis, Inc. v. Merrill Lynch, Pierce, Fenner, & Smith, Inc., 564 F. Supp. 1358, 218 U.S.P.Q. (BNA) 212 (D. Del. 1983).*

n96 *Id. at 1363, 218 U.S.P.Q. at 215.*

n97 *Id. at 1365, 218 U.S.P.Q. at 217.*

n98 Id.

n99 Id.

n100 *Id. at 1366, 218 U.S.P.Q. at 217* (citations omitted).

n101 *Id. at 1369, 218 U.S.P.Q. at 220* (emphasis added) (citing *In re Toma, 575 F.2d 872, 877, 197 U.S.P.Q. (BNA) 252, 257 (CCPA 1978).*

n102 Id.

n103 See *Boulton & Watt v. Bull, 2 H.Bl. 463 (1795),* which is quoted at length in the Robinson treatise and cited supra note 10. In that case, an inventor found a method of reducing the consumption of steam using existing machines. Because the machines and end product were not new, it was hotly contested whether a patent should be conferred on the invention.

n104 *Paine Webber, 564 F. Supp. at 1369, 218 U.S.P.Q. at 220.*

n105 *61 Fed. Reg. 7478 (1996)* (codified at MPEP 2106 (6th ed., rev 3, July 1997)).

n106 *Id. at 7480.*

n107 Id. (emphasis added).

n108 Id. (emphasis added).

n109 One could try to "wiggle out" of the conclusion that in this case a patent was allowed to a business system that manipulated data by, as always, maintaining that the apparatus was the subject of the patent, not the business method. As noted above, the distinction as to what is being patented, the method or the apparatus used in the method, is not always clear. This fuzzy line is blurred even more when means-plus-function language is implemented so that a series of steps is given in the appearance of a physical embodiment. See supra note 27 & supra note 63.

n110 *9 U.S.P.Q.2d (BNA) 1819 (BPAI 1988).*

n111 *Id. at 1820* (citing Tew, supra note 36).

n112 Id. at 1821 (emphasis added) (citing *In re Johnston, 502 F.2d 765, 183 U.S.P.Q. (BNA) 172 (CCPA 1974).*

n113 *927 F. Supp 502, 38 U.S.P.Q.2d (BNA) 1530 (D. Mass. 1996).*

n114 *Id. at 504, 38 U.S.P.Q.2d at 1532* (quoting U.S. Pat. No. 5,193,056).

n115 *Id. at 504-5, 38 U.S.P.Q.2d at 1533.*

n116 *Id. at 505, 38 U.S.P.Q.2d at 1533.*

n117 Id.

n118 Id.

n119 Id.

n120 Id.

n121 *Id. at 506, 38 U.S.P.Q.2d at 1534.*

n122 *Id. at 515, 38 U.S.P.Q.2d at 1542* (citing 1 Donald S. Chisum, Patents: A Treatise on the Law of Patentability, Validity, and Infringement 1.03[5] at 1-75 (1990); 1 Ernest Bainbridge Lipscomb III, Walker on Patents 1:17 at 171 (3d ed. 1984); 1 Peter D. Rosenberg, Patent Law Fundamentals 6.02[3] at 6-82 (2d ed. 1995)).

n123 *Id. at 516, 38 U.S.P.Q.2d at 1542.*

n124 *Id. at 515, 38 U.S.P.Q.2d at 1542.*

n125 *Id. at 507, 38 U.S.P.Q.2d at 1535.*

n126 State Street Bank & Trust Co. v. Signature Financial Group, Inc., (Fed. Cir.) (No. 96-1327).

n127 See *In re Alappat, 33 F.3d 1526, 31 U.S.P.Q.2d (BNA) 1545 (Fed. Cir. 1994)* (en banc) (finding such a device patentable).

n128 See *Arrhythmia Research Tech., Inc. v. Corazonix Corp., 958 F.2d 1053, 22 U.S.P.Q.2d (BNA) 1033 (Fed. Cir. 1992)* (finding such a method patentable).

n129 *State Street Bank, 927 F. Supp. at 504, 38 U.S.P.Q.2d at 1532.*

n130 *Alappat, 33 F.3d at 1544, 31 U.S.P.Q.2d at 1557.*

n131 *Arrythmia Research, 958 F.2d at 1059, 22 U.S.P.Q.2d at 1038.*

n132 *State Street Bank, 927 F. Supp. at 505, 39 U.S.P.Q.2d at 1533.*

n133 Id.

n134 Id.

n135 Id.

n136 Id.

n137 Id. (quoting elements of the claim).

n138 Id. (quoting elements of the claim).

n139 Examination Guidelines, *61 Fed. Reg. 7478, 7483 (1996).*

n140 Id.

n141 Id.

n142 Id.

n143 Id. (emphasis added) (citation omitted).

n144 *Id. at 7489.*

n145 *In re Alappat, 33 F.3d, 1526, 1543, 31 U.S.P.Q.2d 1545, 1556-57 (Fed. Cir. 1994)* (en banc) (emphasis on "abstract ideas" in the original, emphasis on "practical application" added) (citing *Diamond v. Diehr, 450 U.S. 175, 209 U.S.P.Q. (BNA) 1 (1981); Parker v. Flook, 437 U.S. 584, 198 U.S.P.Q. (BNA) 193 (1978); Gottschalk v. Benson, 409 U.S. 63, 175 U.S.P.Q. (BNA) 673 (1972)).*

n146 *56 U.S. (15 How.) 62 (1854).*

n147 *Alappat, 33 F.3d at 1569, 31 U.S.P.Q.2d at 1579* (Newman, J., concurring).

n148 *Alappat, 33 F.3d at 1542, 31 U.S.P.Q.2d at 1556.*

n149 *447 U.S. at 303, 309, 206 U.S.P.Q. (BNA) 193, 197 (1980).*

n150 S. Rep. No. 1979, 82 Cong., 2nd Sess., 5 (1952); H.R. Rep. No. 1923, 82 Cong., 2nd Sess., 6 (1952) (quoting discussions surrounding the enactment of the 1952 Patent Act).

n151 *Arrhythmia Research Tech., Inc v. Corazonix Corp., 958 F.2d 1053, 1061, 22 U.S.P.Q.2d (BNA) 1033.* 1040 (Fed. Cir. 1992) (Rader, J. , concurring).

n152 Examination Guidelines, *61 Fed. Reg. 7478, 7483 (1996).*

n153 Id.

n154 Id. (emphasis added) (citation omitted).

n155 Due to the difficulty of determining whether a computer-related invention is subject- matter eligible, "[u]nder the principles of compact prosecution, each claim should be reviewed for compliance with every statutory requirement for patentability in the initial review of the application." Examination Guidelines, *61 Fed. Reg. at 7479.*

n156 See, e.g., *American Fruit Growers, Inc. v. Brogdex Co., 283 U.S. 1, 11, 8 U.S.P.Q. (BNA) 131, 133 (1931)* (holding that an orange with its rind impregnated with borax to prevent mold decay did not constitute a "manufacture").

n157 Robinson, supra note 6, at 230 (quoting *Cochrane v. Deener, 94 U.S. 780, 788 (1876);* other citations ommitted).

n158 Examination Guidelines, *61 Fed. Reg. at 7481* (citing *Leroy v. Tatham,, 55 U.S. (14 How.) 156, 175 (1852); Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 132, 76 U.S.P.Q. (BNA)280, 282 (1948).*

n159 *Le Roy, 55 U.S. (14 How.) at 175.*

n160 Professor Stern suggests that rights in software "ideas" deserve study because it is likely that traditional intellectual property law is about to be modified to provide rights in pure software abstractions. Richard H. Stern, On Defining the Concept of Infringement of Intellectual Property Rights in Algorithms and Ohter Computer-Related Ideas, 23 AIPLA .Q.J. 401, 406 (Summer 1995).

n161 See *O'Reilly v. Morse, 56 U.S. (15 How.) 62 (1854).*

n162 *Arrhythmia Research Tech., Inc. v. Corazonix Corp., 958 F.2d 1053, 1059, 22 U.S.P.Q.2d (BNA) 1033, 1038 (Fed. Cir. 1992)* (citing *In re Taner, 681 F.2d 787, 790, 214 U.S.P.Q. (BNA) 678, 681 (CCPA 1982).*

n163 Examination Guidelines, *61 Fed. Reg. at 7489* (citations omitted).

n164 As mentioned in note 26 and note 62, we are faced with an additional question. Having initially determined that there is an inventive physical means, it is not always evident whether the patent is for a method or an apparatus to accomplish that method. As both are patent eligible, this additional question is of less consequence. While arguably it may effect the scope of the patent, as was stated in Paine Webber mentioned supra, pigeonholing the patent as a "method" or an "apparatus" is of no consequence in determining whether it is worthy of a patent under *35 U.S.C. 101* analysis. Echoing this

sentiment, the Examination Guidelines allow consideration as an apparatus and as a process if specific computer codes are provided in the specification. Examination Guidelines, *61 Fed. Reg. at 7483.*

n165 Stern, supra note 160 at 408, n.17.

n166 Id.

n167 See Maria T. Arriola, In re Alappat and Beyond: A New Approach to the Patentability of Mathematical Algorithms and Computer Programs in the United States, 5 Fed. Cir. B. J. 294, 299-300.

n168 Examination Guidelines, *61 Fed. Reg. at 7479.*

n169 *Id. at 7480.*

n170 See Arriola, supra note 167 at 298.

n171 For a good example of turning a method claim into an apparatus claim, see *State Street Bank & Trust Co. v. Signature Financial Group, Inc, 927 F. Supp. 502, 511 n.4, 38 U.S.P.Q.2d (BNA), 1530, 1538 n.4.* (D. Mass. 1996). The State Street Bank court transformed into an apparatus a "method of converting signals from binary coded decimal form into binary" which was the method claim in dispute in *Gottchalk v. Benson, 409 U.S. 63, 73, 175 U.S.P.Q. (BNA) 673, 677 (1972).* The State Street Bank court noted the absurdity of treating the apparatus claim formed from the Benson method claims any differently from the way it treated the method claims themselves.

n172 *State Street Bank, 927 F. Supp. at 505, 38 U.S.P.Q.2d at 1533.*

n173 *16 F.3d 1189, 29 U.S.P.Q.2d (BNA) 1845 (Fed. Cir. 1994).*

n174 Examination Guidelines, *61 Fed. Reg. 7478, 7480 (1996)* (citing *Donaldson, 16 F.3d at 1193, 29 U.S.P.Q.2d at 1848; In re Alappat, 33 F.3d 1526, 1540, 31 U.S.P.Q.2d (BNA) 1545, 1554 (Fed. Cir. 1994)* (en banc).

n175 *Donaldson, 16 F.3d at 1195, 29 U.S.P.Q.2d at 1850.*

n176 *State Street Bank, 927 F. Supp. at 505 n.2, 38 U.S.P.Q.2d at 1533 n.2* (emphasis added) (citing *15 U.S.C. 112*, para. 6 (1994)). Perhaps paragraph 6 of 112 authorizes this position. While it states that "an element in a claim for a combination may be expressed as a means or step" it does not conversely state that every expression of a means or step must be construed as being a combination. *35 USC 112.*

n177 Examination Guidelines, *61 Fed. Reg. at 7483.*

n178 *State Street Bank, 927 F. Supp. at 516, 38 U.S.P.Q.2d at 1542.*

n179 *609 F.2d 481, 203 U.S.P.Q. (BNA) 812 (CCPA 1979).*

n180 *Id. at 482, 203 U.S.P.Q. at 813.*

n181 *53 F. 818 (C.C.S.D.N.Y. 1893)*

n182 *In re Allapat, 33 F.3d 1526, 1545, 31 U.S.P.Q.2d (BNA) 1545, 1558 (Fed. Cir. 1994)* (en banc) (citing *In re Freeman, 573 F.2d 1237, 1247 n.11, 197 U.S.P.Q. (BNA) 464, 472 n.11 (CCPA 1978); In re Noll, 545 F.2d 141, 148, 191 U.S.P.Q. (BNA) 721, 726*

(CCPA 1976); In re Prater & Wei, 415 F.2d 1378, 1403, n.29, 162 U.S.P.Q. (BNA) 541, 549-50 (CCPA 1969)).

n183 *Webber, Jackson & Curtis, Inc. v. Merrill Lynch, Pierce, Fenner & Smith, Inc. 564 F. Supp. 1358, 1366-67, 218 U.S.P.Q.2d (BNA) 212, 218 (D. Del. 1983)* (emphasis added).

n184 *Allapat, 33 F.3d at 1544, 31 U.S.P.Q.2d at 1557.*

n185 Examination Guidelines, *61 Fed. Reg. 7478, 7479 (1996).*

n186 *Id. at 7484.*

n187 Such an approach has been described as "utilitarian" or "wealth-maximizing" under the legal philosophy attributed to Jeremy Bentham.

n188 Such a philosophy is in the Lockean tradition of natural law or natural rights under which "to the creator" should go the created goods.

n189 Examination Guidelines, *61 Fed. Reg. at 7479* (citing *In re Toma, 575 F.2d 872, 877-78, 197 U.S.P.Q. (BNA) 852, 857 (CCPA 1978); In re Musgrave, 431 F.2d 882, 893, 167 U.S.P.Q. (BNA) 280, 289-90 (CCPA 1970); In re Schrader, 22 F.3d 290, 297-98m Webber, Jackson & Curtis, Inc. v. Merrill Lynch, Pierce, Fenner & Smith, Inc., 564 F. Supp. 1358, 1368-69, 218 U.S.P.Q. (BNA) 212, 220 (D. Del. 1983).*