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The Patentability of Algorithms: An Update on the Status of the Current Doctrine

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INTRODUCTION

In a previous article I discussed the development of the legal doctrine regarding the patentability of algorithms. I also attempted to indicate some of the problems with the current formulation of the doctrine, as well as issues which might benefit from further judicial clarification. This article is intended to discuss developments that have occurred since the writing of that article which have an impact on the status of the doctrine.

In general terms, these developments can be divided into three categories: 1) a decision of the Federal Circuit discussing whether particular patent claims were directed to statutory subject matter as defined by 35 U.S.C. § 101 and addressing an issue left open by the previous decisions; 2) a decision of the Board of Patent Appeals and Interferences directed to further defining, or clarifying previous definitions of the term “mathematical algorithm”; and 3) decisions addressing the apparent conflict between the Federal Circuit and the U.S. Patent and Trademark Office as to the proper interpretation and application of 35 U.S.C. § 112, Paragraph 6. This article discusses the recent cases which are relevant to each of these developments and concludes with some comments on the doctrine as it now stands.
1. The Federal Circuit Decision

**Arrhythmia Research Technology, Inc. v. Corazonix Corp.** is the most recent Federal Circuit decision involving the patentability of algorithms. *Arrhythmia* involved claims directed to an apparatus and method for analyzing electrocardiograph signals to determine certain characteristics of the heart function as evidenced by those signals. The purpose of the claimed invention was to determine which heart attack victims were at a high risk for developing an acute type of heart arrhythmia known as ventricular tachycardia. This was done in order that those patients at risk could be carefully monitored and given the appropriate treatment.

A patent containing the apparatus and method claims had issued and was the subject of an infringement suit in which its validity was challenged. The lower court granted a motion for summary judgment declaring the patent invalid for failure to claim statutory subject matter because the claims were directed to a mathematical algorithm. The patentee appealed to the Federal Circuit, which reversed the judgment of the lower court.

The claimed invention involved obtaining certain of the heart attack patient's electrocardiograph signals, converting them from analog to digital values, forming a digital representation of the relevant portion of the signals by averaging a large number of the waveforms, processing the composite waveform by a digital high pass filter in reverse time order, determining the average magnitude of the processed waveform, and comparing the magnitude of the processed waveform to a predetermined value. The result of the comparison step was an indication of whether the patient was at higher risk for the onset of ventricular tachycardia.

Certain steps of the invention were described in the specification section of the patent application as being conducted with the aid of a digital computer. The mathematical formulae used to program the computer were also indicated. The specification

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4. Id. at 1054.
5. Id.
6. Id.
7. Id. at 1058.
8. Arrhythmia, 958 F.2d at 1054.
9. Id.
10. Id. at 1055.
11. Id.
12. Id.
stated that dedicated, specific purpose equipment or hard wired logic circuitry could also be used. The Patent and Trademark Office (PTO) had granted the patent without raising the issue of whether its claims were directed to statutory subject matter.

The Court began its opinion by recognizing the presumption of validity which attaches to a duly issued United States patent. The Court then recited the text of 35 U.S.C. § 101. The Court followed by reviewing the development and current status of the doctrine regarding the patentability of algorithms, citing the relevant Supreme Court, Federal Circuit, and Court of Customs and Patent Appeals decisions. The Court summarized the doctrine by stating: The law crystallized about the principle that claims directed solely to an abstract mathematical formula or equation, including the mathematical expression of scientific truth or a law of nature, whether directly or indirectly stated, are nonstatutory under section 101; whereas claims to a specific process or apparatus that is implemented in accordance with a mathematical algorithm will generally satisfy section 101.

The Court then referred to the two-stage analysis which had been adopted for use when determining whether patent claims involving algorithms were directed to statutory subject matter, (i.e., the Freeman-Walter-Abele test). The Court then applied the two stage analysis separately to the group of process claims and to the group of apparatus claims.

Beginning with the process claims, the Court stated, "[W]e accept for the purposes of this analysis that a mathematical algorithm is included in the subject matter of the process claims in that some

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14. Id.
15. Id.
16. "Thus we give plenary review to the question [of whether the claims are directed to statutory subject matter], with appropriate recognition of the burdens on the challenger of a duly issued United States patent. See 35 U.S.C. § 282." Arrhythmia, 958 F.2d at 1056.
17. Id.
18. The interested reader will find a discussion of these cases and a critical analysis of their content in my previous paper.
19. Arrhythmia, 958 F.2d at 1058.
20. The Freeman-Walter-Abele test is a two-part test designed to assist courts with their analysis of patent claims reciting algorithms. It can be briefly stated as: 1) Does the claim directly or indirectly recite an "algorithm" in the Benson sense of that term? Here the reference is to the definition of an algorithm cited in Gottschalk v. Benson, 409 U.S. 63 (1972), (i.e., "a procedure for solving a given type of mathematical problem"); and 2) Is the algorithm applied in any manner to physical elements or process steps, provided that its application is circumscribed by more than a field of use limitation or non-essential post-solution activity?
21. Arrhythmia, 958 F.2d at 1058-60.
claimed steps are described in the specification by mathematical formulae.\textsuperscript{22} With the first stage of the analysis completed, the Court proceeded to the second stage. The Court noted that the process claims included a limitation to a particular field of use, i.e., analysis of electrocardiograph signals for a specific purpose.\textsuperscript{23} The Court indicated that this limitation was of some importance as it “is not ignored in determining whether the subject matter as a whole is statutory, for all of the claim steps are in implementation of this method.”\textsuperscript{24}

It is worth noting that the claim language cited by the Court is found in the preamble to the claims.\textsuperscript{25} This raises the separate issue of whether such a limitation is of patentable weight. The use of a field of use limitation in the preamble to a claim was addressed in the context of algorithms in an earlier decision of the Supreme Court, where it was found to be insufficient, by itself, to confer patentability.\textsuperscript{26}

In \textit{Arrhythmia}, the Court's later comments suggest that what was of the most significance to the patentability determination in the case was that something physical was being operated upon.\textsuperscript{27} In addressing the issue of the abstractness or intangibility of the claimed process, the Court stated, “[t]he resultant output [of the process steps] is not an abstract number, but is a signal related to the patient’s heart activity.”\textsuperscript{28} The Court goes on to say “[t]hese claimed steps of ‘converting’, ‘applying’, ‘determining’, and ‘comparing’ are physical process steps that transform one physical, electrical signal into another.”\textsuperscript{29}

The Court concluded its analysis of the process claims by stating, “[t]he Freeman-Walter-Abele standard is met, for the steps of Simson’s claimed method comprise an otherwise statutory process whose mathematical procedures are applied to physical process steps. The method claims do not wholly preempt these procedures, but limit their application to the defined process steps. The process

\begin{itemize}
\item 22. \textit{Id.} at 1058.
\item 23. “Simson’s process is claimed as a ‘method for analyzing electrocardiograph signals to determine the presence or absence of a predetermined level of high-frequency energy in the late QRS signal.’” \textit{Arrhythmia} 958 F.2d at 1059.
\item 24. \textit{Id.}
\item 25. \textit{Id.} at 1055.
\item 26. \textit{See} Parker v. Flook, 437 U.S. 584 (1978). This decision implies that limitation to a specific field of use, without more, is insufficient, if the claims recite a mathematical algorithm.
\item 27. \textit{Arrhythmia}, 958 F.2d at 1059-60.
\item 28. \textit{Id.} at 1059.
\item 29. \textit{Id.}
The Court then discussed the apparatus claims, noting that "[t]he Simson apparatus for analyzing electrocardiograph signals is claimed in the style of 35 U.S.C. § 112, paragraph 6." This refers to the practice of claiming elements of a combination by use of means-plus-function language. The Court went on to discuss the claim language with reference to the specific means for implementing the claimed structure which was referred to in the specification. The Court concluded that "[t]he Simson apparatus claims thus define 'a combination of interrelated means' for performing specified functions."

The Court again addressed the intangibility issue by stating "'[t]he claimed invention . . . converts one physical thing into another physical thing just as any electrical circuitry would do.'" The Court then commented on the Appellant's assertion that "the final output of the claimed apparatus (and process) is simply a number, and that Benson and Flook support the position that when the end product is a number, the claim is nonstatutory and can not be saved by claim limitations of the use to which this number is put." The Court addressed this argument by emphasizing that the result of the claimed invention was not an abstract quantity, but represented a tangible, concrete measure. The Court concluded its analysis of the apparatus claims by stating "[t]he Simson apparatus claims satisfy the criteria for statutory subject matter. They are directed to a specific apparatus of practical utility and specified application, and meet the requirements of 35 U.S.C. § 101."

In keeping with the earlier decisions the Arrhythmia decision supports the patentability of applications of algorithms. It also emphasizes the importance of tying the operation of the algorithm to something physical, in this case the manipulation of electrical signals which represent a physical entity. With regards to the language of the method and apparatus claims themselves, it is worth

30. Id. at 1059-60.
31. Id. at 1060. See note 2 of this article for the text of the cited paragraph.
32. Id., citing In re Iwahashi, 888 F.2d 1370, 1375 (Fed. Cir. 1989).
33. Arrhythmia, 958 F.2d at 1060, citing In re Sherwood, 613 F.2d 809, 819 (CCPA 1980), cert. denied, 450 U.S. 994 (1981). This citation by the Court is reminiscent of the language from the Cochrane v. Deener case cited by the Supreme Court in Benson, although that language referred to a process claim. See 409 U.S. 63, 70.
34. Arrhythmia, 958 F.2d at 1060.
35. "[T]he number obtained is not a mathematical abstraction; it is a measure in microvolts of a specified heart activity, an indicator of the risk of ventricular tachycardia." Id.
36. Arrhythmia, 958 F.2d at 1060.
noting that the broad method claim cited in the decision implicitly claims an element of physical structure, i.e., ("high pass filter means"), while the apparatus claim cited in the decision is written in means plus function language, except for one element, again a "high pass filter means".  

The use of language reciting an element of physical structure limits the scope of the claims and avoids the intangibility and preemption problems which plagued algorithm claims in other cases. The restriction of the operation of the algorithm to electrocardiograph signals makes the claimed invention concrete rather than abstract. The combination of these factors enable the claim language to overcome most of the prior objections to patenting algorithms. Thus Arrhythmia indicates how method claims drawn to an algorithm can be patented. If the claims are tied to something physical, as in transforming something physical from one form to another, the § 101 hurdle can be overcome. With regards to the apparatus claims, the decision supports the Iwahashi approach and further indicates that § 101 can be satisfied by claiming physical elements which operate or are transformed in a way constrained by the algorithm. 

A final note on the decision is that it includes a lengthy concurrence opinion from Justice Rader. The concurrence, presents a thorough commentary on the pitfalls of the doctrine, with particular emphasis on Justice Rader's opinion that the Supreme Court opinions after Benson had strictly limited that decision, and in doing so, had "refocused the patentability inquiry on the terms of the Patent Act rather than on non-statutory, vague classifications". Justice Rader also mentions specific problems with the two-stage Freeman-Walter-Abele test for statutory subject matter.

2. The Board of Patent Appeals and Interferences Decision Discussing the Definition of the Term "Mathematical Algorithm" 

In re Pardo had limited the holding in Benson to "mathematical algorithms". This meant that in order to apply Benson and the resulting Freeman-Walter-Abele test, it was necessary to determine what constituted such an entity. This is actually a complicated

37. Id. at 1055.  
38. Id. at 1061-66.  
39. Id. at 1066.  
40. The interested reader is encouraged to examine the concurrence, and/or my previous article which points out similar problems with the doctrine.  
41. 684 F.2d 912 (CCPA 1982).
question, because it is difficult to reach agreement on what is meant by the term. Earlier courts had addressed this question, although their solutions seem overinclusive.  

The U.S. Patent and Trademark Office Board of Patent Appeals and Interferences (Board) stepped into the fray with its decision in *Ex Parte Logan*. This case concerned a patent application which contained claims drawn to “an apparatus for detecting inspiration of a patient in response to a time varying signal representative of the patient’s respiration.” In discussing the Examiner’s rejection of the claims at issue, the Board reviewed the standard two-step test for non-statutory subject matter. Since application of the test necessitates the determination of whether the claims recite a mathematical algorithm, the Board included comments on the matter.

The Board first cited the *Benson* definition of the term, and then expanded on it through examples. “Mathematical algorithms include mathematical equations and formulas for calculating a numerical output value from a number of numerical input values, whether directly or indirectly claimed.” The Board then mentioned that mathematical algorithms were not limited to those categories it had previously listed, but included “methods of calculation.” In discussing this category of non-statutory algorithms, the Board stated “the essence of a method of calculation in the § 101 sense, whether it is in the form of mathematical formula or equation or some other form, is the computation of one or more numbers from a different set of numbers by performing a series of mathematical computations.”

The Board then presented a summary of its interpretation of the appropriate definition of a mathematical algorithm. “[W]e believe a claim should be considered as reciting a mathematical algorithm, only if it essentially recites, directly or indirectly, a method of computing one or more numbers from a different set of numbers by performing a series of mathematical computations.”

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42. See *In re Walter*, 618 F.2d 758, 764 n. 4 (CCPA 1980) (methods of calculation, mathematical formulas, and mathematical procedures). See also *In re Pardo*, 684 F.2d at 916 (mathematical formula, calculation, or algorithm).
44. *Id.* at 1466, citing claim 1 of the application.
45. *Id.* at 1467.
47. *Id.*
48. *Id.* at 1467-68 (emphasis in original).
49. *Id.* at 1468 (emphasis in original). The Board followed this statement with the comment, “[c]onsequently, a claim which essentially recites another type of method does not
One way of interpreting the Board's definition of a mathematical algorithm is that it focuses on whether the claims at issue are essentially attempting to protect the mathematical operations involved in "computing one or more numbers from a different set of numbers." This can be viewed as providing a better definition of what the Court in *Benson* was referring to in its definition of an algorithm. The "procedure for solving a given type of mathematical problem" referred to in *Benson* may simply mean those computations or operations used to produce a final output (the solution of the problem) from a set of inputs.

One commentator has interpreted the Board's decision as "severely limit[ing] the definition of unpatentable subject matter" and that the Board "narrow[ed] the scope of the definition of a mathematical algorithm". Whether this is true remains to be seen. It is also not clear what influence, if any, the Board's decision will have on the courts. However, this decision may become significant if it affects how examiners in the Patent and Trademark Office view claims which recite mathematical computations.


In my previous article, I referred to the possibility of a difference in opinion between the Federal Circuit and the Patent and Trademark Office as to the proper interpretation and application of 35 U.S.C. § 112, ¶6. As subsequent decisions of the Federal Circuit and Board have indicated, this is indeed a fertile area for disagreement, or at least heated discussion.

The current round of the argument between the Federal Circuit and the PTO over the appropriate interpretation of 35 U.S.C. § 112, ¶6, at least in the context of a patent examiner's review of the claims in a patent application, was initiated by the Federal Circuit's decision in *In re Iwahashi*. Although the Court's comments in that case regarding 35 U.S.C. § 112, ¶6 were dicta, it is apparent that the Court favors a literal interpretation of that portion of the statute, both in the context of ex parte proceedings before the PTO.

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51. See 8 SANTA CLARA COMPUTER & HIGH TECH. L.J. 251 at 279-80.
52. 888 F.2d 1370 (Fed. Cir. 1989).
The Court took the opportunity to formalize its dicta in *Iwahashi* in the case of *In re Bond*. *Bond* concerned a patent application directed to a specific remote control feature of a telephone answering machine, the remote turn-on feature. The inventor had claimed a combination of prior art technology (which enabled an owner of the machine to remotely set it to answer incoming calls) with a delay means which would prevent the machine from answering the owner's initial call for a predetermined period after being set to answer incoming calls. This was designed to prevent the owner from incurring any toll charges while setting the machine. The claims of the application were rejected by an examiner under 35 U.S.C. § 102 and § 103 over two prior art patents.

In comparing the prior art to the claims at issue, the Court stated:

> The disclosed and prior art structures are not identical, but the claim may nonetheless be anticipated. While a "means-plus-function limitation" may appear to include all means capable of achieving the desired function, the statute requires that it be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof."

Thus, the Court left no doubt as to how it viewed the PTO's obligations where section 112 §6 was concerned. During the examination of patent applications, PTO examiners were to limit the scope of claims phrased in means-plus-function language based on the con-

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53. "In the Solicitor's brief the summary of argument states that the claim [at issue in the case] 'encompasses any and every means for performing the functions recited therein'. We point out that . . . [t]he claim is . . . subject to the limitation stated in 35 U.S.C. § 112 §6 . . . This provision precludes the Solicitor's interpretation of the claim." 888 F.2d at 1375. In an accompanying footnote the Court further stated, "Section 112 §6 cannot be ignored when a claim is before the PTO any more than when it is before the courts in an issued patent." *Id.* at n. 1. The PTO responded to the Court's dicta in *Notice Interpreting In re Iwahashi*, 1112 OG 18 (1990). The PTO expressed concern that a claim expressed entirely in means-plus-function language would, under the Court's dicta, be distinguishable from a method claim if the content of the specification (as suggested by application of 35 U.S.C. § 112, §6), rather than the literal claim language was determinative when undertaking a statutory subject matter analysis. This, the PTO stated, "would be directly contrary to precedent." 1112 OG at 19.

54. 910 F.2d 831 (Fed. Cir. 1990), reh. denied Nov. 1, 1990.
55. *Id.* at 832.
56. *Id.*
57. *Id.*
58. *Id.*
tent of the specification. This precludes an expansive interpretation of such claim language and can act to prevent the rejection of such claims based on prior art.

The PTO responded to Bond in Notice, Applicability of the Last Paragraph of 35 U.S.C. § 112 to Patentability Determinations Before the Patent and Trademark Office. In the Notice, the PTO reviewed the applicability of § 112, ¶6 to ex parte patentability determinations based on the statutory language, legislative history, CCPA decisions, long-standing PTO interpretations, legislative reenactment, and Federal Circuit cases. Having done so, the PTO concluded that "the clause does not apply." Without going into detail, it appears that the PTO's argument is based on two primary considerations, and several secondary ones. The primary considerations are the binding precedent of In re Lundberg, and the PTO's assertion that the language used in § 112, ¶6 has been interpreted by courts, including the U.S. Supreme Court, to refer to the context of infringement actions and not to patentability determinations by the PTO. The secondary considerations include Congressional reenactment of § 112, ¶6 which "implicitly adopted and re-adopted the PTO/CCPA interpretation", the assertion that § 112, ¶6 acts like the reverse doctrine of equivalents, the presumption of validity conferred on an issued patent, and policy considerations related to the PTO's workload and the clarity of claims incorporating means-plus-function language if § 112, ¶6 were read literally.

While some of the PTO's arguments are persuasive, they do not directly address the issue of whether Bond is now binding precedent, or perhaps more accurately, why it is not. Bond arose in the

61. 1334 OG at 631.
62. Id. at 631.
64. 244 F.2d 543 (CCPA 1957).
65. The PTO maintains that courts have used the language 'construed to cover' from § 112, ¶6 "only to refer to post-issuance court matters and not to PTO patentability determinations". 1134 OG at 633.
66. 1134 OG at 634-35.
context of claim rejections during PTO review of a patent application based on prior art cited by the examiner. Thus, Bond appears to be directly contrary to the "binding precedent" cited by the PTO. Even if in a later case the Federal Circuit were to explicitly overturn Lundberg, the PTO's comments suggest that it would still be reluctant to adopt the literal interpretation of § 112, ¶6 in patentability determinations.

To make its position clear, the PTO followed Bond with its own decision on the issue, Ex parte Bowles. Bowles involved an appeal from a final rejection by the examiner in a reexamination proceeding of a patent containing claims drawn to a fluid amplifier system. The Board first stated its opinion of what the proper role of the specification was in the context of claim interpretation, citing the Federal Circuit. The Board then concluded, "while we have made every effort to liberally interpret the claims in light of the specification, it would be error on our part to infer or read into these claims any limitations from the specification." The Board then noted that the Appellants had argued that "'means plus function' limitations in the claims on appeal must as a matter of law be interpreted [in accordance with a literal reading of 35 U.S.C. § 112, ¶6]." The Board cited Lundberg and noted that "[a]t this time we are unable to reconcile the holding of Lundberg with that of Bond. We merely point out that Lundberg is regarded as binding precedent by our reviewing court. If a conflict exists between Lundberg and the panel decision in Bond, the earlier Lundberg decision is binding."

A still further twist to the controversy has been noted by a commentator. The central issue seems to be whether claim language is to be interpreted in a different manner depending upon the context in which that interpretation is being made, (i.e., a patentability determination by the PTO versus a validity decision or in-
fringement case before a court). In *Atlantic Thermoplastics Co., Inc. v. Faytex Corp.*, the Federal Circuit was concerned with the language construction in product-by-process claims in the context of an infringement case. The issue was whether process limitations stated in patent claims were to be treated in the same manner when interpreting the scope of the claims in both a patentability determination before the PTO or an infringement proceeding before a court, or were to be applied (or not) depending on the setting.

The Court in *Atlantic* supported the use of a double standard in which claim language would be read differently depending upon the context of the proceeding. While this is significant, it is not clear if this reasoning can be carried over to the situation of deciding whether the statutory language contained in §112 is to be read literally when determining patentability.

The claims at issue in *Atlantic* contained specific language, which was either serving as a limitation on or was not being applied to limit the claimed subject matter. The claims were also of a particular type which has its own history of court interpretation. This argues for restricting the impact of *Atlantic* to the category of product-by-process claims.

The current means-plus-function language controversy can be viewed from several perspectives. In one sense, there is a disagreement between two branches of the government as to the appropriate interpretation of the actions of the third branch. The PTO is an administrative body, and hence part of the executive branch. Its duty is to implement the statutes passed by the legislature and signed into law by the chief executive. Its interpretative role is therefore limited. The Federal Circuit is a part of the judicial branch, specifically charged by Congress with bringing a measure of consistency to the operation of the patent laws. This favors the Court's interpretation of the statutory language.

However, it should be noted that the PTO position is not without merit. As Congress enacted and reenacted 35 U.S.C. §112, ¶6 without modification, it is possible to view this as an implicit recognition of and agreement with the PTO's interpretation. Further, because *Lundberg* has not been explicitly overturned by an en banc decision of the Federal Circuit, the PTO can continue to maintain

75. 23 USPQ2d 1481 (Fed. Cir. 1992).
76. *Id.* at 1484-91.
77. *Id.* at 1490-91.
78. *Id.*
that there is no binding precedent which requires it to alter the manner in which it examines patent applications.

Another way to view the controversy is from the perspective of general principles of statutory interpretation. As statutes are generally to be interpreted in accordance with the ordinary, common meaning of their words, this argues for a literal application of the words of the statute. This would impose an explicit limitation on the scope of a means-plus-function claim, (i.e., the "corresponding structure, material, or acts described in the specification and equivalents thereof"). Such an interpretation would not, as the PTO suggests, place a burden on its examiners because the specification could be referred to as the source for any structure which would be used to bound the scope of the means language.

The issue would then relate to interpretation of the meaning of the term "equivalents". Is this term to be equated to its meaning in the doctrine of equivalents (or reverse doctrine of equivalents) sense, or does it have some other meaning? Is the equivalent meant to be a straight structural equivalent, or one determined by reference to the claimed function? One commentator has suggested that the inability of the PTO and the Court to agree that two meanings may exist for the use of the term "equivalents" is at the root of the problem.\(^7\)

It is also possible that the difference between the positions of the PTO and the Federal Circuit may end up being relevant only to the situation in which claims are being examined for purposes of determining whether they satisfy 35 U.S.C. § 101, (i.e., whether they claim statutory subject matter). This is supported by two recent decisions of the Board.\(^8\) However, such a restriction of the context of the disagreement between the PTO and the Federal Circuit is not supported by the statutory language, or by the facts of Iwahashi, Bowles, and Bond.

The current disagreement between the PTO and the Federal Circuit may end up being resolved by a later decision in which the Court explicitly overturns Lundberg and sets the future course for how the language of § 112 is to be interpreted. It may also end up being addressed by Congress upon the next reenactment of the patent laws. This would allow Congress to make sure that the PTO's

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79. See Adamo articles cited at n. 63.
80. See Ex parte Akamatsu, 22 USPQ2d 1915 (Bd. Pat. App. & Int. 1992) and Ex parte Alappat, 23 USPQ2d 1340 (Bd. Pat. App. & Int. 1992), both of which discuss the interpretation of the language of 35 U.S.C. § 112, ¶6 in the context of § 101 statutory subject matter determinations, and both of which curiously neglect any mention of Bond or the Notice.
interpretation of the statute is in conformity with the intended policies behind the patent laws. No matter what happens in the future, for the present time we are in the midst of a battle.

CONCLUSION

The doctrine regarding the patentability of algorithms has been refined but not substantially altered by the most recent Federal Circuit decision. The Freeman-Walter-Abele two-part test is still applied by both the PTO and the courts. The Arrhythmia decision further supports the idea of tying the operation of an algorithm to something physical, and confining it to a specific field of use in order to satisfy the §101 inquiry. The disagreement between the PTO and the Federal Circuit as to the interpretation of §112, ¶6 is more significant, at least for the present time. Whether it will remain so will depend upon the actions of the players.