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NOTES

GROWING PAINS FOR THE BOARD OF PATENT APPEALS AND INTERFERENCES: A PLAN FOR RESTORING JUDICIAL INDEPENDENCE

INTRODUCTION

The Patent and Trademark Office (PTO) bears the responsibility for the issuance of patents to inventors for novel and unobvious inventions. However, patent examiners may reject a patent application if they believe that an invention fails to meet these statutory requirements. In such cases, the inventor may appeal the examiner’s decision to the Board of Patent Appeals and Interferences (Board). On appeal, a panel of Board members reviews the patent application and the record of action regarding the application in the PTO to decide whether to grant a patent in


2. A patent grants an inventor the right to exclude others from making, using or selling the subject matter of an invention for a term of 20 years from the date of filing. 35 U.S.C.A. § 154(b)(2) (West Supp. 1995). This term is a change from the former which provided patent protection 17 years from the date of issuance. See id. The change in term was enacted as a part of GATT and went into effect in June, 1995. See id.


4. 35 U.S.C. § 103 (1988). An inventor cannot obtain patent protection for an invention if the difference between the subject matter of the invention and the prior art is such that a person of ordinary skill in the art would find the invention to be obvious. Graham v. John Deere Co., 383 U.S. 1, 15 (1966).

5. Invention is “the act or operation of finding out something new; the process of contriving and producing something not previously known or existing, by the exercise of independent investigation and experiment. Also the article or contrivance or composition so invented.” BLACK’S LAW DICTIONARY 824 (6th ed. 1990).

opposition to the examiner's decision. While the procedure governing appeals to the Board is found within 35 U.S.C. § 7, the applicant is not assured of an independent review because the Commissioner of the PTO has used the ambiguous language in the provision to predetermine the outcome of certain appeals. The Commissioner of the PTO has relied on the ambiguity of § 7 to justify reversal of Board decisions, even though § 7 gives "[t]he Board" sole authority to grant rehearings of Board decisions. This occurs because the statute does not detail with specificity which Board members may authorize such review. For example, on two occasions the Commissioner authorized rehearings when he disagreed with Board decisions granting patents in applications which had previously been denied by the patent examiner. These rehearings resulted in reversals of the Board decisions. To ensure a decision according to his opinion, the Commissioner appointed new panels with Board members whom he trusted to vote according to his opinion. Even though a majority of Board members protest the Commissioner's interference in the appeal of PTO decisions, the Commissioner may continue to assert the right to influence the appellate process. Moreover, in appellate review of the propriety of one of these rehearings, the Court of Appeals for the Federal Circuit (CAFC) condoned the Commissioner's actions, giving deference to his judgment and interpretation of the Patent Act.

8. See infra notes 121-74 and accompanying text for a discussion of the Commissioner's interference with the Board's decisions in Ex parte Akamatsu and Ex parte Alappat.
11. See infra notes 121-73 and accompanying text for a discussion of the Commissioner's actions relating to Ex parte Akamatsu and Ex parte Alappat.
12. See infra notes 126-30, 154-60 and accompanying text for a discussion of the Commissioner's actions in setting aside the decisions of Board panels in Ex parte Akamatsu and Ex parte Alappat and appointing new panels composed of Board members that would vote in favor of his position.
13. See infra notes 131-39 and accompanying text for a discussion of the Examiners-in-Chief's protest of the Commissioner's interference with Board independence and the Commissioner's response asserting his authority to regulate PTO policy through Board decisions.
14. See infra notes 131-34 and accompanying text for a discussion of the Board's memorandum, signed by 33 of the 44 Examiners-in-Chief, protesting the Commissioner's interference with the Board's independence.
15. See infra notes 164-73 and accompanying text for a discussion of the CAFC's holding in In re Alappat relating to the issue of Board independence from
Notwithstanding the Commissioner's actions and the deference given to him by the CAFC, Congress did not intend to give the Commissioner the authority to control Board decisions when it passed the Patent Act of 1927. In the enactment of this legislation, the Commissioner relinquished the power to personally hear patent appeals in exchange for more efficient procedures in the Patent Office.\textsuperscript{16} While the Commissioner and Assistant Commissioners were added as members of the Board, their roles were primarily intended to expand the number of panels that could sit simultaneously, thus increasing the number of appeals which the Board could hear at any one time.\textsuperscript{17} The Act gave the Commissioner authority only to designate the membership of panels in order to align the technical skills of the Board members with the subject matter of the appeal, not to predetermine the outcome of Board appeals by “stacking” the panel with allies.\textsuperscript{18}

As a consequence of the Commissioner's interference, the participants in the appellate process are adversely affected. These applicants face additional costs, time and uncertainty over the rules that the Commissioner will apply. Additionally, the Commissioner has frustrated and offended the Board members by impinging upon their independence.

This Note examines the issue of the lack of independence currently given the Board resulting from the Commissioner of the PTO's interference in Board decisions. Part I chronicles the development of the appellate process within the PTO. Part II details the circumstances that led to the current dispute within the PTO. Part III analyzes the legislative intent of the drafters of the current patent statute. Lastly, this Note proposes an amendment to § 7 of the Patent Act intended to restore the judicial independence of the Board while preserving the Commissioner's authority to set and enforce PTO policy.
I. THE HISTORY OF THE PATENT APPEALS PROCESS

The evolution of the patent application process required the development of the patent appellate process. Originally, the Secretary of State, then Thomas Jefferson, approved patents by signing properly filed patent applications. Today, the Commissioner of the PTO signs patent applications approved by a patent examiner only after a rigorous examination of the application or, on appeal from an examiner’s rejection, a patent application approved by a panel of the Board. This Section discusses the development of the patent appellate process starting from the Constitutional grant of authority which mandated that the federal government regulate patents, up to and including the inception of judicial appeals under the Patent Act of 1839. This Section then discusses the evolution and codification in 1861 of the internal procedures that developed in the Patent Office in response to the marked increase in patent applications between 1840 and 1860. Finally, this Section discusses the Patent Act of 1927 which established what essentially constitutes the present Board of Patent Appeals and Interferences.

A. 1789-1861: The Existence of a Cumbersome Informal Appellate Process

The Constitution granted Congress the authority to enact legislation “to promote the Progress of Science and useful Arts.” The first patent statute, enacted in 1790, and amended in 1793, gave the responsibility for granting patents to the Secretary of State, the Secretary of War and the Attorney General. From 1790 until 1836, an inventor could obtain a patent on demand from the government merely by properly filing a patent application. As such, during this period, appeals did not generally occur.

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19. U.S. CONST. art. I, § 8, cl. 8. The Congress shall have Power “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” Id.
23. Alappat, 33 F.3d at 1549-51 (Archer, C.J., concurring in part, dissenting in part) (discussing the legislative histories of Patent Acts from 1790 to 1927); see also Michael W. Blommer, The Board of Patent Appeals and Interferences, AIPLA BULL. 188, 190-93 (1992) (discussing the circumstances surrounding the enactment of patent appeals statutes from 1861 through 1927); see also Federico, supra note 22, at 838-64, 920-49 (discussing generally the history of patent office appeals).
Eventually, the public became critical of the system, believing that the government was issuing too many invalid patents. In response to this criticism, the Patent Act of 1836 (Act of 1836) established the Patent Office and provided statutory grounds for its Commissioner to refuse patent applications. The Senate Committee that introduced the amendment realized that the power to refuse patents also necessitated the establishment of an appellate process. Therefore, the Act of 1836 provided for a panel of three disinterested arbitrators, selected by the Secretary of State on a case-by-case basis, to hear applicants' appeals. Once selected, the panel members were required by oath to act faithfully and impartially. The Act of 1836 required the panels to observe minimal judicial procedures, and made the decisions of the panels binding on the Commissioner.

This appellate process proved difficult to administer. Typically two to five hearings were required before the board could reach a final decision. The length of the process, coupled with the fact that each arbitrator received no more than the nominal fee of ten dollars per appeal, made it increasingly difficult for the Secretary of State to locate people willing to participate in more than one hearing. This high turnover also resulted in inconsis-

25. Blommer, supra note 23, at 190. Public distrust resulted from the Patent Office's lack of manpower and its failure to properly maintain procedures to keep the patent application and issuance process functioning. Id.
27. Federico, supra note 22, at 839.
28. Id. at 838-39.
29. Id. at 839.
30. Id.
31. Id. After receiving the written opinion of the Commissioner's decision, the board had to provide reasonable notice to the Commissioner and the applicant of the time and the place for the hearing. Id. Both sides had the opportunity to furnish the board with whatever additional facts and evidence were necessary to arrive at a just decision. Id. After examining all the evidence presented, the board had the authority to reverse the Commissioner's rejection of the application. Id. at 839-40.
32. Federico, supra note 22, at 840. The Board's decision was final in ex parte cases and in cases of interferences between two applicants. Id. However, review under a Bill in Equity was possible in the case of an interference between an issued patent and a patent application. Id.
33. Id. at 841-42. When the appeal was accepted, the Secretary of State wrote to three persons requesting that they serve on the board. Id. at 841. If any of those contacted declined to participate, the Secretary had to contact additional persons until the board was filled. Id. Once three persons agreed to serve on the board, they met and established the procedures for the hearing. Id. at 841-42. The board then contacted the Commissioner and the applicant to schedule the hearing. Id. at 842.
34. Id.
35. Id. at 840 n.5, 842. In the nine appeals in 1838, 15 different people participated as board members. Id. at 841.

The Patent Office became a busy place in succeeding years as the number of applications filed increased from 765 in 1840 to 7,653 in 1860. Consequently, the Commissioners could not adequately perform both their administrative duties and devote individual attention to each patent application. The Commissioners were thus forced to delegate some of their authority to other members of the Patent Office in order to manage the ever-growing workload.


To improve efficiency, the various Commissioners made informal procedural changes within the Patent Office. The Commissioners began to delegate decision making authority to the primary examiners who reviewed patent applications. In cases where the applicant disagreed with the examiner's decision, the examiner turned over the application to the Commissioner for a final decision. Eventually, the Commissioners began appointing "informal boards" consisting of two or more examiners to act on the Commissioner's behalf to decide appeals. The internal appellate procedures reduced the workload on the Commissioners. However, the decisions by the "informal boards" lacked uniformity because the examiners constantly rotated board positions.

The Patent Act of 1861 (Act of 1861) essentially codified the internal appellate process of the Patent Office. The Act of

36. Id. at 842.
38. Federico, supra note 22, at 843.
39. Blommer, supra note 23, at 190. In 1850, there were 2,193 applications. Id.
40. Id.; Federico, supra note 22, at 854.
41. Federico, supra note 22, at 854-55. Commissioner Eubank was probably the first to delegate authority to other examiners to investigate a case. Id. at 855.
42. Blommer, supra note 23, at 190; Federico, supra note 22, at 854-56.
43. Federico, supra note 22, at 854.
44. Id.
45. Blommer, supra note 23, at 190. In 1857, Commissioner Holt wrote a letter to Congress explaining the growing inability of the Commissioner to hear all appeals in person. Id. He suggested that an "informal board" could aid the Commissioner in deciding appeals. Id.
46. Id.
47. Id.
49. See Blommer, supra note 23, at 190; Federico, supra note 22, at 856.
1861 established a permanent three-member Board of Examiners-in-Chief (EICs) to hear appeals. The applicant had two appeals within the Patent Office: first, a direct appeal to the Board of EICs from the examiner's decision; second, an appeal to the Commissioner from the Board's decision. The applicant also held the right to appeal the final decision of the Patent Office to the District Court for the District of Columbia. This procedure remained essentially unchanged until the Patent Act of 1927.


While more efficient than the early practice within the Patent Office, the appellate system established by the Act of 1861 was an expensive and time consuming process for an applicant. The Act of March 2, 1927 (Act of 1927) resulted from a compro-

50. Act of March 12, 1861, ch. 88, § 2, 12 Stat. 246. Examiners-in-Chief were defined as "persons of competent legal knowledge and scientific ability." Id.; see also 35 U.S.C. § 7(a) (1988); Act of March 2, 1927, ch. 273, § 3, 44 Stat. 1335.
51. Federico, supra note 22, at 857.
52. Id. at 857-64, 920-23, 931-33. The appellate process within the Patent Office remained static from 1861 until the Patent Act of 1927. See infra notes 53-59 and accompanying text for a discussion of the Patent Act of 1927. However, appeals to the federal court system changed drastically during the 66 years between the acts. Federico, supra note 22, at 857-64, 920-23, 931-33.

In 1863, Congress abolished the Circuit Court for the District of Columbia and created the Supreme Court of the District of Columbia. Id. at 857. Patent appellants had the option of bringing their appeal before the Chief Justice or any of the three Associate Justices, whichever the appellant felt would render a favorable ruling. Id. at 857-60. Eventually, defects in the system and complaints from the Patent Office resulted in provisions in the Act of July 8, 1870, requiring the Supreme Court of the District of Columbia sitting en banc to hear all patent appeals. Id. at 920-22. Subsequently, the Judiciary Act of 1893 established the Court of Appeals of the District of Columbia, vesting the new court with jurisdiction over patent appeals. Id. at 931-33. The Court of Appeals retained authority over patent appeals from 1893 until 1929. See Steven W. Lundberg & John C. Reich, Identifying Mathematical Algorithms in Patent Claims, COMPUTER LAW., Sept. 1993, at 2.
53. Blommer, supra note 23, at 190-92; Federico, supra note 22, at 941-44. In 1926, the estimated duration of an appeal within the Patent Office was 15 months; nine months for the Board appeal and six months for the Commissioner's appeal. H.R. REP. No. 1889, 69th Cong., 2d Sess. 1 (1927).
54. Act of March 2, 1927, ch. 273, § 3, 44 Stat. 1335. The Act stated in relevant part:

The examiners in chief shall be persons of competent legal knowledge and scientific ability. The Commissioner of Patents, the first assistant commissioner, the assistant commissioner, and the examiners in chief shall constitute a board of appeals, whose duty shall be, on written petition of the appellant, to review and determine upon the validity of the adverse decisions of examiners upon applications for patents and for reissues of patents. . . . Each appeal shall be heard by at least three members of the board of appeals, the members hearing such appeal to be designated by the commissioner. The board of appeals shall have sole power to grant hearings.
misce between parties who desired to accelerate the appellate pro-
cess within the Patent Office and those who opposed reducing the
Commissioner's supervisory authority over the Board. The Act
of 1927 eliminated the direct appeal to the Commissioner. The
Commissioner and two Assistant Commissioners were also added
to the Board. Additionally, the Act of 1927 gave the Commiss-
ioner the authority to assign EICs to panels consisting of three or
more Board members who were authorized to hear appeals. The
language used in the Act of 1927 remains essentially un-

II. THE COMMISSIONER OF THE PTO IMPINGES UPON THE
INDEPENDENCE OF THE BOARD

Conflict between the Commissioner and the Board arose when
the Commissioner improperly expanded Board panels to
reconsider certain appeals. The precedent of the Court of Cus-
toms and Patent Appeals (CCPA) and the CAFC indicates that
the Commissioner holds the authority to appoint an expanded
panel at the beginning of an appeal. However, the Commissi-

Id. See infra note 63 for the relevant portions of the current version at 35 U.S.C. § 7.

55. Blommer, supra note 23, at 192-94. See infra notes 174-232 and accompanying
text for a discussion of the legislative history of the Act of 1927.


57. Blommer, supra note 23, at 192. The original draft of the bill required ei-
ther the Commissioner or an Assistant Commissioner sit on each three-member
panel assigned to hear an appeal. Id. The American Bar Association opposed the
bill as presented because no panels could convene if the Commissioner and Assis-
tant Commissioners were unavailable. Id. The bill as enacted allowed any three
members of the Board to constitute a quorum. Id.

58. Id.


60. See infra notes 121-73 and accompanying text for a discussion of the
Commissioner's improper actions in the Akamatsu and Alappat decisions.

However, the Commissioner has properly convened expanded Board panels in
other cases. See, e.g., Ex parte Alpha Industries Inc., 22 U.S.P.Q.2d 1851, 1852 (Bd.
of Pat. App. and Int. 1992) (convening five-member panel); Ex parte Fujii, 13
U.S.P.Q.2d 1073, 1074 (Bd. of Pat. App. and Int. 1989) (convening five-member
panel based on significance of issue raised); Ex parte Kristensen, 10 U.S.P.Q.2d
1701, 1702 (Bd. of Pat. App. and Int. 1989) (convening five-member panel); Ex
parte Kitamura, 9 U.S.P.Q.2d 1787, 1788 (Bd. of Pat. App. and Int. 1988) (conven-
ing five-member panel because of possible conflict in case law); Ex parte Horton,
226 U.S.P.Q. 697, 698 (Bd. of Pat. App. and Int. 1985) (convening five-member
panel).

61. See Lundberg & Reich, supra note 52, at 2 n.9. The Court of Customs and
Patent Appeals held appellate jurisdiction for the PTO from 1929 to 1982. Id. In
1982, the CCPA was dissolved and the CAFC was simultaneously created and as-
signed jurisdiction in the same act. Id.

62. See Hahn v. Wong, 892 F.2d 1028, 1031 (Fed. Cir. 1989) (reviewing decision
of seven-member panel convened based on significance of issue raised); In re
er improperly expanded panels late in the appeals process in two appeals, thus exceeding the authority granted to him by 35 U.S.C. § 7(b). As such, the Commissioner’s recent conduct in expanding the panels in the patent appeals of Norio Akamatsu and Kuriappan Alappat raises questions regarding the relationship between the Commissioner and the Board, and Congress should accordingly reevaluate the appellate process within the PTO.

This Section begins with a discussion of the patent application process and the flexibility available to the inventor in claiming an invention. This Section then discusses the dispute between the Commissioner of the PTO and the CAFC over the interpretation of certain types of claims during the patent examination process. Finally, this Section discusses Ex parte Akamatsu and Ex parte Alappat, two cases where the dispute with the CAFC motivated the Commissioner to impinge upon the judicial independence of the Board.

A. The Patent Act Allows an Inventor Flexibility to Claim Both Broad and Narrow Protection for an Invention

The PTO will issue a patent to anyone who invents a new and useful process, machine, manufacture, or composition of

Lundak, 773 F.2d 1216, 1219 (Fed. Cir. 1985) (reviewing decision of 18 member panel); In re Durden, 763 F.2d 1406, 1408-09 (Fed. Cir. 1985) (reviewing decision of 16 member panel); In re Henriksen, 399 F.2d 253, 254 n.1 (C.C.P.A. 1968) (reviewing decision of nine-member panel convened based on the nature of the legal issue raised).

63. 35 U.S.C. § 7 (1988). The statute states in relevant part:
   (a) The examiners-in-chief shall be persons of competent legal knowledge and scientific ability, who shall be appointed to the competitive service. The Commissioner, the Deputy Commissioner, the Assistant Commissioners, and the examiners-in-chief shall constitute the Board of Patent Appeals and Interferences.
   (b) The Board of Patent Appeals and Interferences shall, on written appeal of an applicant, review adverse decisions of examiners upon applications for patents. Each appeal . . . shall be heard by at least three members of the Board of Patent Appeals and Interferences, who shall be designated by the Commissioner. Only the Board of Patent Appeals and Interferences has the authority to grant rehearings.

Id.

64. See infra notes 121-39 and accompanying text for a discussion of the Akamatsu decision and its ramifications within the PTO.

65. See infra notes 140-73 and accompanying text for a discussion of the Alappat decision.


67. 33 F.3d 1526 (Fed. Cir. 1994) (en banc).

68. 35 U.S.C. § 100(b) (1988). The term "process" denotes "an act or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing. If new and useful, it is just as patentable as is a piece of machinery" regardless of whether the machinery pointed out as suitable to perform
matter, or a new and useful improvement on a process, machine, manufacture, or composition of matter. This grant is subject to other conditions contained in Title 35, such as novelty and unobviousness. To obtain a patent, the inventor submits a written application to the Commissioner of the PTO. The application must include a specification of the invention, a
drawing of the invention,\footnote{35 U.S.C. § 113 (1988).} an oath certifying his belief that he is the original inventor\footnote{35 U.S.C. § 115 (1988). “The applicant shall make [an] oath that he believes himself to be the original and first inventor of the process, machine, manufacture, or composition of matter, or improvement thereof, for which he solicits a patent; and shall state of what country he is a citizen.” \textit{Id}.} and the filing fee.\footnote{35 U.S.C. § 111 (1988).}

The inventor is permitted to present claims for apparatus and methods\footnote{A method is “[t]he mode of operating, or the means of attaining an object. . . . Method, properly speaking, is only placing several things, or performing several operations, in the most convenient order, but it may signify a contrivance or device.” \textsc{Black’s Law Dictionary} 991 (6th ed. 1990).} of varying scope in a single application,\footnote{35 U.S.C. § 112 (1988). See supra note 76 for the relevant text of this statutory provision.} which allows wide latitude for protection of an invention.\footnote{In re Lundberg, 244 F.2d 543, 548 (C.C.P.A. 1957).} For example, the inventor may make a broad claim for an apparatus as general as a chair, or make a narrow claim for a specific invention of a chair with an automatic reclining mechanism, inflatable lumbar support and built-in massager. Additionally, the inventor may make claims for the chair in any one or a combination of the elements of the reclining mechanism, the lumbar support and the massager. Moreover, each claim is evaluated independently of the other claims.\footnote{In re Iwahashi, 888 F.2d 1370, 1375 (Fed. Cir. 1989). An element expressed in means-plus-function terms does not specify the structures, materials, or acts necessary to support the function. See 35 U.S.C. § 112 (1988).} The examiner may allow protection for individual claims in an application even though one or more of the other claims in the application is rejected.

The inventor also holds wide latitude in specifying the elements of an apparatus claim or a method claim. In the claim, the inventor may express an element of the claim in great detail, or may recite the requirements for the element broadly, as a means for performing a specified function.\footnote{Id. at 547.} The latter expression is referred to as “means-plus-function” language.\footnote{Id. at 548.}

As an example, the above-described claim for the chair contains the elements of four legs and a seat. The inventor may broadly state that the legs and seat are attached with a means for fastening. The claim drafted in means-plus-function terms would provide the inventor protection against chairs assembled with screws, bolts, dowels, glue or any other item that performs the function of fastening. However, because the claim provides broad protection, the examiner may reject the claim if a prior art reference\footnote{35 U.S.C. § 103 (1988). The term “prior art” denotes existing knowledge,} exists for a chair with four legs assembled using any
means for fastening.

In the alternative, the inventor may specifically state in the claim that the legs and seat are attached with 1/4"-20 x 1 1/2" Phillips hex head screws. The inventor would receive the right to exclude others from making chairs assembled with the specified screws. The protection awarded for such a specific claim is narrower than the protection for the broad claim, but the examiner is also less likely to reject the narrow claim. To bar the claim, a prior art reference must specify the exact means for fastening contained in the narrow claim, i.e., the hex head screw.\(^7\)

The example illustrates the trade-off between claim specificity and protection: broad claims allow greater protection but are more likely to be anticipated by a prior art reference; narrow claims provide less protection but are less likely to have a prior art reference. Moreover, the factors considered are more complex in sophisticated technological areas, such as computer software.\(^8\)

The complexity surrounding the interpretation of computer software claims initiated the current dispute between the Commissioner and the CAFC. This dispute ultimately resulted in the Commissioner impinging upon the judicial independence of the Board.

B. The Commissioner Rejects the Federal Circuit's Narrow Interpretation of Patent Claims

During its existence, the CCPA required that the Patent Office give a broad interpretation to claims expressed in means-plus-function terms. In the 1957 case of In re Lundberg,\(^9\) the inventor appealed in an attempt to overturn a rejection of his claims for an apparatus and method for searching for mineral deposits from an airplane.\(^9\) On appeal before the CCPA, the inventor argued that the court should give a narrow interpretation to the means-plus-function terms by limiting the claims to the literature references, patents, or known uses of the invention that antedated the invention at issue. Mooney v. Brunswick Corp., 663 F.2d 724, 733 (7th Cir. 1981); see also American Standard Co. v. Pfizer, Inc., 722 F. Supp. 86, 125 (D. Del. 1989).

87. As stated previously, this simple example is subject to the other conditions for patentability, such as novelty and unobviousness. See supra notes 68-79 and accompanying text for a discussion of the statutory requirements for patenting an invention.

88. The difference between specifying a ROM (read-only-memory) for retrieving the square of a number and a means for retrieving the square of a number determines whether a claim is patentable subject matter under §101. See infra notes 99-106 and accompanying text for a discussion of the CAFC's decision in In re Iwahashi.

89. 244 F.2d 543 (C.C.P.A. 1957).

90. Id. at 544. A panel of the Board affirmed the examiner's rejection of claims containing means-plus-function limitations for reading on the prior art. Id.
structures described in the specification.91 However, the court refused to adopt the inventor's interpretation of the rejected claims.92 In so ruling, the court held that the patent specification statute, § 112, requires that the claim particularly set out the subject matter the inventor considers his invention.93

The Lundberg court looked at the legislative history of the Patent Act and found that Congress did not intend to destroy the basic precept of patent law that "the claim is the measure of the invention."94 The Lundberg court reasoned that adopting the appellant's argument would eliminate the broad protection available to inventors under the existing patent laws.95 By limiting the means-plus-function terms, the proposed construction would eliminate the distinction between broad and narrow claims.96 The court concluded that applicants may not rely on the specification to impart patentability to an otherwise unpatentable claim.97

Later rulings by the CCPA and its successor court, the CAFC, accepted the broad interpretation of means-plus-function terms until In re Iwahashi.98 The issue on appeal in Iwahashi related to a claim for a simplified, cost-effective device for calculating correlation coefficients used in voice recognition.99 The Board affirmed an examiner's rejection of the application by holding that the claimed invention was an unpatentable mathematical algorithm.100 The rejected claim contained several elements ex-

91. Id. The appellant expressed his claims in terms of an apparatus with elements "adapted" to perform functions. Id. at 544-45. For purposes of the appeal, the Court construed the term "adapted" as equivalent to "means" as contemplated in 35 U.S.C. § 112. Id. at 546. See supra note 76 for the relevant text of 35 U.S.C. § 112.
92. Lundberg, 244 F.2d at 546.
93. Id. at 547.
94. Id.
95. Id. at 547-48. The application contained both broad and narrow claims for protection. Id. Therefore, the court concluded that appellant likely did not contemplate that adoption of his argument would eliminate the broad protection afforded inventors. Id. at 548.
96. Id. at 547-48. The specification disclosed in the application would restrict the breadth of protection normally granted with a broad claim although the claim was drafted expansively. Id.
97. Id. at 548.
98. 888 F.2d 1370 (Fed. Cir. 1989).
99. Id. at 1371. The claimed process performed a comparison of a voice signal sample to stored voice signal samples. Id. A correlation coefficient is a statistic related to the probability that the compared signals have the same origin. Id. The inventor claimed that his process for calculating correlation coefficients was less expensive and more accurate at high speeds. Id. at 1371-72.
100. Id. at 1370. An algorithm is a procedure for solving a given type of mathematical problem. Gottschalk v. Benson, 409 U.S. 63, 65 (1972). "The broader definition of algorithm is 'a step-by-step procedure for solving a problem or accomplish-
In Benson, the Court held that a software program that represents nothing more than a mathematical algorithm is not patentable where it would wholly preempt the use of the algorithm. Benson, 409 U.S. at 71-72. The inventor sought a patent on a method of programming a general-purpose digital computer to convert a number from binary-coded decimal (BCD) format to a pure binary number. Id. at 64-67. The BCD system replaces each decimal numeral in a number with the equivalent binary number. Id. at 66. In BCD, the number 39 is represented by 0011 1001, because the decimal 3 is equal to binary 0011 and decimal 9 is equal to binary 1001. Id. at 67. In the binary system, decimal 39 is equal to binary 100111. Id. at 66. The claimed invention was a computer programmed to perform the conversion of BCD 0011 1001 to binary 100111. Id. The Court observed that the claimed invention was a mathematical procedure carried out on an existing computer. Id. The Court found that the mathematical formula claimed had no practical application except in relation to the claimed device. Id. at 71. The Court held that a patent granted for the only practical use of the formula would have the effect of patenting the algorithm itself. Id. at 72. The Court found that mathematical algorithms fall into the category of natural phenomena, mental processes and abstract intellectual concepts which are not patentable. Id. at 67.

In Parker v. Flook, the applicant attempted to distinguish his claim from Benson by arguing that his claim was limited by specific post-solution activity and, therefore, did not wholly preempt the mathematical algorithm. Parker v. Flook, 437 U.S. 584, 589-95 (1978). Flook claimed a method for updating alarm limits during a catalytic conversion process. Id. at 585. The method was a three-step process of first measuring the values of relevant process variables, such as temperature and pressure, then using an algorithm to calculate an updated alarm limit value and finally adjusting the alarm limit to the updated value. Id. The only improvement over existing methods of updating alarm limits was the automation of the second step of the process. Id. at 586. Additionally, the claim was limited to application in the petrochemical and oil refining industries. Id. The inventor argued that the specific post-solution activity of updating the alarm limits was sufficient to distinguish his claim from Benson and to constitute a claim for patentable subject matter. Id. at 590. The Court was unimpressed by the argument and affirmed the rejection of the claim. Id. The Court reasoned that if Flook's argument was accepted any competent draftsman could attach some post-solution activity and make an otherwise unpatentable algorithm patentable. Id.

In Diamond v. Diehr, the Court held that a claim may contain a mathematical algorithm and still constitute patentable subject matter. Diamond v. Diehr, 450 U.S. 175, 191-92 (1981). The claimed invention was a method for manufacturing molded articles in a rubber molding press. Id. at 181. The steps in the process included preheating the mold, installing the unmolded rubber in the mold, closing the press, initiating a timer to monitor the elapsed time since closing, heating the mold to maintain its temperature during closure, monitoring the temperature, calculating the reaction time at periodic intervals, comparing the calculated reaction time to the elapsed time and opening the press when the reaction time equals the elapsed time. Id. The step calculating the reaction time involved the solution of a mathematical algorithm. Id. The algorithm was one element of the extensive process for curing rubber. Id. at 177-81. The Court held that whether a claim constitutes patentable subject matter is determined by evaluating the claim as a whole. Id. at 187. The Court concluded that "a claim drawn to patentable subject matter does not become nonstatutory simply because it uses a mathematical formula, computer program, or digital computer." Id.

Diehr was the last case heard by the Supreme Court on the issue of patent-
pressed in means-plus-function form and one element referring to a specific apparatus, a ROM (read-only-memory). The CAFC reversed the rejection, holding that the claim did not wholly preempt the algorithm, and, as such, defined a patentable invention. In so ruling, the court found particularly persuasive the presence of the ROM element along with the means-plus-function elements. The court also responded to the PTO’s collateral argument that the means-plus-function expressions “encompassed any and every means for performing the functions recited therein.” Unlike the Lundberg court, the Iwahashi court held that the PTO must interpret means-plus-function claims narrowly and that each means-plus-function element is limited by the specifications disclosed in the application. However, notwithstanding the precedential nature of the CAFC’s opinion, the PTO chose not to follow the reasoning of the Iwahashi court.

In February of 1990, then acting Assistant Commissioner for Patents, James E. Denny, published a notice announcing the ability of mathematical algorithms. See generally Lundberg & Reich, supra note 52 (discussing the current standards for patenting mathematical algorithms as developed by the CCPA and the CAFC subsequent to Diehr, including the identification of mathematical algorithms under the Freeman-Walter-Abele test).

101. Iwahashi, 888 F.2d at 1370-73. The appealed claim as represented in the opinion read:

[a] An auto-correlation unit for providing auto-correlation coefficients for use as feature parameters in pattern recognition for N pieces of sampled input values . . . , said unit comprising:
[b] means for extracting N pieces of sample input values . . . from a series of sample values in an input pattern . . . ;
[c] means for calculating the sum of the sample values . . . ;
[d] a read only memory associated with said means for calculating;
[e] means for feeding to said read only memory the sum of the sampled input values as an address signal;
[f] means for storing in said read only memory the squared value of each sum;
[g] means for fetching and outputting the squared values of each such sum of the sample input values from said read only memory: . . .
[h] means responsive to the output . . . of said read only memory for providing an auto-correlation coefficient for use as a feature parameter . . . .

Id. at 1373 (emphasis added).

Read Only Memory, or “ROM,” is stored permanently in a computer to provide it with operating instructions. Cairn McGregor, Personal Computing, MONTREAL GAZETTE, May 1, 1993, at J2. The information contained in ROM is generally installed in the computer at the time of manufacture. Id.

102. Iwahashi, 888 F.2d at 1374-75.
103. Id. at 1375.
104. Id.
105. Id.
107. PTO Interpretation of In re Iwahashi, 39 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 972, at 399 (Mar. 15, 1990) [hereinafter PTO Interpretation].
PTO's interpretation of the *Iwahashi* decision.\textsuperscript{108} While conceding that the CAFC's holding was not inconsistent with the policies and precedents under which the PTO operated,\textsuperscript{109} Denny's notice asserted that Iwahashi's claim was distinguishable from claims drafted exclusively in means-plus-function terms due to the presence of the specific apparatus, the ROM.\textsuperscript{110} Denny discounted the court's statements related to claim interpretation by referring to them as "dicta."\textsuperscript{111} Furthermore, the PTO reasserted the CCPA's position that a claim operates as the measure of the invention.\textsuperscript{112} The Commissioner stated that the examiners should continue to give means-plus-function terms the broadest reasonable interpretation.\textsuperscript{113}

The CAFC disregarded the opinions of the PTO in reaffirming the reasoning of the *Iwahashi* decision in its per curiam opinion in *In re Bond*.\textsuperscript{114} *Bond* involved an appeal from the Board's rejection of a claim, expressed in means-plus-function form, for a remote turn-on feature for a telephone answering machine.\textsuperscript{115} The *Bond* court vacated the Board's decision because, by interpreting the claim broadly, the Board failed to make a factual determination of whether the claim was structurally equivalent to the prior art.\textsuperscript{116} Accordingly, the court remanded the appeal to the Board to make findings of fact based on a narrow reading of the claim, consistent with the holding in *Iwahashi*.\textsuperscript{117}

Despite the CAFC's reaffirmation that the PTO was required to interpret claims narrowly, the PTO continued to ignore the CAFC's decisions. In December of 1990, then Commissioner Harry F. Manbeck issued an internal directive expressing the view that *Lundberg* still controlled interpretation of means-plus-function claims, thus requiring PTO examiners to read means-plus-function claims broadly.\textsuperscript{118} Manbeck also declared that *Lundberg* re-

\begin{itemize}
\item \textsuperscript{108} Id.
\item \textsuperscript{109} Id. The notice stated that the claim drafted with the ROM "carried the [appellant's] burden of demonstrating that the claim was truly drawn to a specific apparatus distinct from other apparatus capable of performing the identical functions." Id.
\item \textsuperscript{110} Id.
\item \textsuperscript{111} Id. at 400.
\item \textsuperscript{112} *PTO Interpretation*, supra note 107, at 400.
\item \textsuperscript{113} Id.
\item \textsuperscript{114} 910 F.2d 831, 833 (Fed. Cir. 1990).
\item \textsuperscript{115} Id. at 832.
\item \textsuperscript{116} Id. at 833-34. In applying § 112, para. 6, the Board must make additional determinations regarding questions of fact. Id.; see also *Pennwalt Corp. v. Durand-Wayland*, 833 F.2d 931, 933-34 (Fed. Cir. 1987). The Court vacated the Board's decision because it could not rule on the merits of the case without the necessary factual determinations. *Bond*, 910 F.2d at 833-34.
\item \textsuperscript{117} *Bond*, 910 F.2d at 833.
\item \textsuperscript{118} *PTO Issues Directive to Examiners on Means-Plus-Function Equivalency*, 41
mained binding precedent and that only the CAFC sitting \textit{en banc} could overrule Lundberg.\footnote{En banc \textit{[r]efers to a session where the entire membership of the court will participate in the decision rather than the regular quorum. \ldots [W]hen the issues involved are unusually novel or of wide impact, the case will be heard and decided by the full court sitting \textit{en banc.}} BLACK'S LAW DICTIONARY 526-27 (6th ed. 1990).}

\section*{C. The Commissioner's Dispute with the CAFC Impinges Upon Board Independence}

The first encroachment by the Commissioner upon the independence of the Board occurred in \textit{Ex parte Akamatsu}.\footnote{PTO Directive, supra note 118, at 412. The Commissioner's position was based on the CAFC's first published decision at its inception in 1982. South Corp. v. United States, 690 F.2d 1368 (Fed. Cir. 1982). In this case, the CAFC sat \textit{en banc} to determine the body of case law it would adopt as its precedent. \textit{Id.} The Court felt that "starting from scratch" would result in years of delay while an adequate body of case law was constructed which would cause instability and uncertainty in areas of law previously within the jurisdiction of its predecessor courts, the Court of Claims and the CCPA. \textit{Id.} at 1370-71. The court further held that a panel of the CAFC could not overrule a CCPA decision. \textit{Id.} The CAFC has subsequently lessened the severity of \textit{South Corp.} by permitting CAFC panels to modify holdings that were stated or interpreted too broadly. Johnston v. IVAC Corp., 885 F.2d 1574, 1579 (Fed. Cir. 1989).}

In this case, the examiner rejected two claims containing means-plus-function elements by stating that the applicant failed to claim patentable subject matter.\footnote{Id. at 1916. The inventor claimed methods and apparatus for generating interpolated data for use in a graphics display. \textit{Id.} The invention calculated the value of an interstitial graphic data point located between four known graphic data points. \textit{Id.} The application contained two claims for methods for performing the graphics interpolation and two claims for apparatus to perform the graphics interpolation. \textit{Id.}} The Board panel, consistent with Lundberg, affirmed the examiner's rejection of the claims, holding that the claims represented mathematical algorithms which did not constitute patentable subject matter.\footnote{Akamatsu, 22 U.S.P.Q.2d at 1921-23.} Additionally, the Board panel took the opportunity to discount the CAFC's holding in \textit{Iwahashi}.\footnote{Id. The Board panel cited the PTO's published response regarding the interpretation of \textit{Iwahashi}. See supra notes 108-13 and accompanying text for a discussion of the PTO's response to the CAFC's \textit{Iwahashi} decision.} In rejecting the two claims containing means-plus-function language, the Board panel distinguished \textit{Iwahashi} on its facts and ignored as \textit{dicta} the CAFC's narrow interpretation of means-plus-function terms.\footnote{Id. at 1918-19. See supra note 100 for a discussion of Supreme Court decisions addressing the patentability of mathematical algorithms.}

Notwithstanding the holding of \textit{Akamatsu}, the opinion of the
Board panel is more important for what it does not say. The opinion fails to mention that the panel issuing the decision was not the panel originally assigned to hear the appeal.\textsuperscript{126} The original panel interpreted the claims narrowly, as required by the CAFC in \textit{Iwahashi}, and thus found in favor of the inventor.\textsuperscript{127} However, the Chairman of the Board, Saul Serota, prevented the mailing of the decision to Akamatsu.\textsuperscript{128} A second panel was formed composed of Commissioner Manbeck, Deputy Commissioner Comer, Assistant Commissioner for Trademarks Samuels, Chairman Serota and Vice-Chairman Calvert.\textsuperscript{129} The new panel overturned the decision of the original panel and affirmed the rejection after construing Akamatsu's claims broadly.\textsuperscript{130}

The EICs became incensed by the actions of the Commissioner.\textsuperscript{131} A memorandum signed by thirty-three of the forty-four EICs was sent to Commissioner Manbeck on April 24, 1992.\textsuperscript{132} In the memorandum, the Board members expressed their concern over what they perceived as “an increasing number of instances in which the composition of panels of the Board . . . has been manipulated in a manner which interferes with the decisional independence of the Board and gives the appearance that a predetermined or predecided outcome has been reached in cases appealed.”\textsuperscript{133} The Board members conceded the Commissioner's authority to designate panel members under 35 U.S.C. § 7. However, the memorandum did question the Commissioner's authority to “un-designate” one panel and redesignate a completely new panel for any reason, let alone to reverse a signed decision with which he disagrees.\textsuperscript{134}

Five days later, Commissioner Manbeck responded.\textsuperscript{135} The Commissioner asserted that he possessed the authority to establish PTO legal policy through decisions by the Board even if redesignation of a Board panel is necessary to ensure the outcome desired by the Commissioner.\textsuperscript{136} Although the Commissioner stated that each member of a panel has only one vote, he added

\begin{thebibliography}{99}
\bibitem{126} Members of Board of Appeals Complain about Interference with Independence, 44 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1081, at 33 (May 14, 1992) [hereinafter Board Complains].
\bibitem{127} Id.
\bibitem{128} Id.
\bibitem{129} Id.
\bibitem{130} Id.
\bibitem{131} Blommer, supra note 23, at 188.
\bibitem{132} Correspondence Between Board Members and PTO Commissioner on Board Independence, 44 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1081, at 33 (May 14, 1992) [hereinafter Correspondence].
\bibitem{133} Id.
\bibitem{134} Id.
\bibitem{135} Id.
\bibitem{136} Id. at 34.
\end{thebibliography}
that he holds the authority to select certain Board members for a panel even if he knows that those Board members share his opinion on the issue on appeal. Commissioner Manbeck went on to claim that Congress never intended to create a Board that operated independently from the Commissioner, citing his membership on the Board and his authority to designate panel members in support of the proposition. The Commissioner concluded his memorandum by informing the EICs that they constitute important members of the PTO "team" with the role of assisting the Commissioner in establishing legal policy. This letter indicated that Manbeck intended to stack panels in the future if he found it necessary to do so.

D. The Commissioner Stacks the Panel with Allies in the Reconsideration of Ex Parte Alappat

Even though he assured the EIC Board members of their importance, the Commissioner nonetheless continued to impinge upon the Board's independence as demonstrated by the reconsideration decision in Ex parte Alappat. The invention in Alappat related to a means for displaying a smooth waveform on a digital oscilloscope. That is, the invention allowed the draw-

137. Correspondence, supra note 132, at 33-35.
138. Id. at 34-35.
139. Id. at 35.
140. "As normally used in the context of administrative adjudication 'reconsideration' implies reexamination, and possibly a different decision by the entity which initially decided it." BLACK'S LAW DICTIONARY 1272 (6th ed. 1990). A reconsideration is synonymous to a rehearing for purposes of the patent office. In re Alappat, 33 F.3d 1526, 1533 (Fed. Cir. 1994) (en banc) [hereinafter Alappat III]. The Board has the authority to grant rehearings to parties receiving an adverse decision in an appeal. 35 U.S.C. § 7(b) (1988).
141. Ex parte Alappat, 23 U.S.P.Q.2d 1340 (Bd. of Pat. App. and Int. 1992) [hereinafter Alappat I].
142. Id. at 1340. The following excerpt from Circuit Judge Rich's opinion in Alappat III provides an excellent description of the technology involved:

The screen of an oscilloscope is the front of a cathode-ray tube (CRT), which is like a TV picture tube, whose screen, when in operation, presents an array of pixels (or raster) arranged at intersections of vertical columns and horizontal rows, a pixel being a spot on the screen which may be illuminated by directing an electron beam to that spot, each column in the array represents a different time period, and each row represents a different magnitude. An input signal to the oscilloscope is sampled and digitized to provide a waveform data sequence (vector list), wherein each successive element of the sequence represents the magnitude of the waveform at a successively later time. The waveform data sequence is then processed to provide a bit map, which is a stored data array indicating which pixels are to be illuminated. The waveform ultimately displayed is formed by a group of vectors, wherein each vector has a straight line trajectory between two points on the screen at elevations representing the magnitudes of two successive input
ing of sharper lines on a picture tube which allowed improved results for the user. One of Alappat's claims expressed all elements of the invention in means-plus-function terms. The examiner rejected the claim for failing to recite patentable subject matter. In so finding, the examiner determined that Alappat attempted to claim a mathematical algorithm. Alappat appealed to the Board.

A Board panel reversed the examiner's rejection, holding that the claim constituted statutory subject matter. The panel conceded that the claim recited a mathematical algorithm. However, after interpreting the means-plus-function terms consistently with Iwahashi, the panel found that the claim was an application of the mathematical algorithm. The panel held that the claim

signal samples and at horizontal positions representing the timing of the two samples. Because a CRT screen contains a finite number of pixels, rapidly rising and falling portions of a waveform can appear discontinuous or jagged due to differences in the elevation of horizontally contiguous pixels included in the waveform. In addition, the presence of 'noise' in an input signal can cause portions of the waveform to oscillate. Moreover, the vertical resolution of the display may be limited by the number of rows of pixels on the screen.

To overcome these effects, Alappat's invention employs a system wherein each vector making up the waveform is represented by [varying] the illumination intensity of pixels having center points bounding the trajectory of the vector. The intensity at which each of the pixels is illuminated depends on upon the distance of the center point of each pixel from the trajectory of the vector. Pixels lying along an edge of the trace receive illumination decreasing in intensity proportional to the increase in distance from the vector trajectory.

Alappat III, 33 F.3d at 1537.

A rasterizer for converting vectors comprising:
(a) means for determining a vertical distance between the endpoints of each of the vectors in the data list;
(b) means for determining an elevation of a row of pixels that is spanned by the vector;
(c) means for normalizing the vertical distance and elevation; and
(d) means for outputting illumination intensity data as a predetermined function of the normalized vertical distance and elevation.

Id. at 1340-41.

Id.

Id.

Id.

Id. at 1341.

Id. at 1340-41.

Id. at 1347-48 (Lindquist, Thomas and Krass, Examiners-in-Chief, disagreeing with the majority of the new decision). The claim recited a series of mathematical operations with a numeric value as the end-product of the claimed invention. Id. at 1348.

Id. The specifications recited conventional electronic structures for per-
was not an improper attempt to wholly preempt the algorithm.\textsuperscript{150} In reaching its decision, the panel relied on several decisions of both the CCPA and the CAFC, including \textit{Iwahashi}.\textsuperscript{151} After the panel released its decision, the examiner petitioned for reconsideration,\textsuperscript{152} requesting an expanded panel on reconsideration.\textsuperscript{153}

The Commissioner granted the examiner's request for reconsideration with an expanded panel.\textsuperscript{154} The Commissioner assigned an expanded eight-member panel consisting of the members of the original panel plus five new members.\textsuperscript{155} Coincidentally, the new members of the expanded panel consisted of the same five Board members who issued the unanimous published opinion in \textit{Akamatsu}.\textsuperscript{156} Not surprisingly, the expanded panel reversed the original panel's decision by a 5-3 vote, with the original panel members disagreeing.\textsuperscript{157} The majority used essentially the same analysis in reaching its decision as that appearing in \textit{Akamatsu}.\textsuperscript{158} That is, by declining to read the specification into the claim, the majority found that the claim as recited constituted an unpatentable mathematical algorithm.\textsuperscript{159} The majority also took the opportunity to use \textit{Alappat} as a forum for reasserting its position on \textit{Iwahashi} by discrediting the value of the holding forming the functions recited in Claim 15. \textit{Id.} The application specified that the means for performing the functions recited in clauses (a) and (b) were two separate arithmetic logic units (ALUs). \textit{Id.} Barrel shifters were specified to perform the normalizing function of clause (c). \textit{Id.} The final outputting functions in clause (d) were performed by two ROMs. \textit{Id.}

150. \textit{Id.} at 1349.
151. \textit{Id.} at 1348-49; \textit{see e.g.,} Arrhythmia Research Technology, Inc. v. Corazonix Corp., 22 U.S.P.Q.2d 1033 (Fed. Cir. 1992) (holding that the statutory nature of an apparatus claim is determined with reference to the patent specification); \textit{In re Iwahashi}, 888 F.2d 1370 (Fed. Cir. 1989) (holding that the fact that an apparatus operates according to an algorithm does not make it nonstatutory); \textit{In re Meyer}, 688 F.2d 789 (C.C.P.A. 1982) (holding that claims should be evaluated in view of the supporting disclosure); \textit{In re Abele}, 684 F.2d 902 (C.C.P.A. 1982) (holding that claims are patentable that recite plural means for performing various specified functions which are disclosed to be conventional structures in the art).
152. \textit{Alappat I}, 23 U.S.P.Q.2d at 1340. "A single request for reconsideration or modification of the decision may be made if filed within one month from the date of the original decision." 35 C.F.R. § 1.197(b) (1993).
154. \textit{Id.}
155. \textit{Id.} Commissioner Manbeck added himself, Deputy Commissioner Comer, Assistant Commissioner Samuels, Chairman Serota, and Vice Chairman Calvert. \textit{Id.}
156. \textit{See supra} notes 126-30 and accompanying text for a discussion of the Commissioner's actions directed toward ensuring a favorable decision in \textit{Ex parte Akamatsu}.
158. \textit{Id.} at 1341-47.
159. \textit{Id.} at 1344-47.
based on factual limitations, dismissing the statements of the CAFC as dicta, and criticizing the *Iwahashi* court for failing to properly follow CCPA precedent.\(^\text{160}\) Obviously disappointed with the Board decision, Alappat appealed the reconsideration decision to the CAFC.

The CAFC ordered that the court would hear Alappat's appeal *en banc* to settle the ongoing dispute between the Commissioner and the court over the proper interpretation of means-plus-function terms.\(^\text{161}\) Additionally, the court *sua sponte* raised the issues of whether the reconsideration was authorized and if not, whether the court held jurisdiction to render a decision on the merits of the appeal.\(^\text{162}\) Realizing the potential significance of the *Alappat* decision, the court gave the parties ample time to prepare briefs on the jurisdiction issue and solicited amicus curiae briefs relating to both jurisdiction and the merits of the appeal.\(^\text{163}\)

The *Alappat* court held that the Commissioner possessed the authority to designate the reconsideration panel but reversed that panel's rejection of Alappat's claim.\(^\text{164}\) The court acknowledged the Commissioner's authority pursuant to 35 U.S.C. § 7(b) to form expanded panels of the Board and to designate Board members to serve on such panels.\(^\text{165}\) The majority reasoned that language to the contrary was not present in the statute or the legislative history of § 7(b).\(^\text{166}\) Nevertheless, the court found that the last sen-

\(^{160}\) Id. at 1343-44. See supra notes 108-13 and accompanying text for a discussion of the Commissioner's response to the holding in *Iwahashi*.

\(^{161}\) *In re Alappat*, 980 F.2d 1439, 1444 (Fed. Cir. 1992) [hereinafter *Alappat II*].

\(^{162}\) Id. at 1439-40. The court directed the parties to prepare briefs addressing the following three questions:

1. When a three-member panel of the Board has rendered its decision, does the Commissioner have the authority to constitute a new panel for purposes of reconsideration of the first decision?

2. If the Commissioner lacks such authority, is the decision of the Board for purposes of 28 U.S.C. 1295(a)(4)(A)? If not, does this court have jurisdiction to reach the merits of the appealed decision?

3. What is the relationship, if any, between the “reconsideration” action taken in this case and “rehearings” by the Board provided for in 35 U.S.C. § 7(b)?

Id.

\(^{163}\) Id.

\(^{164}\) *Alappat III*, 33 F.3d at 1531-32. On the merits, the court upheld the *Iwahashi* interpretation of means-plus-function claims. Id. at 1539-41. The CAFC expressly overruled *Lundberg* in the interim period between the oral arguments and the decision in *Alappat III*. See *In re Donaldson*, 16 F.3d 1189, 1192-95 (Fed. Cir. 1994) (en banc; 11-0 decision) (holding that examiners must apply § 112, para. 6 during patent examinations and expressly overruling *Lundberg* and any other contrary precedent).

\(^{165}\) *Alappat III*, 33 F.3d at 1531-34.

\(^{166}\) Id. at 1532-33.
tence of § 7(b) precludes the Commissioner from personally granting a rehearing. The court found that the legislative intent behind § 7(b) operated to eliminate the burden on the Commissioner of hearing appeals. In lieu of an appeal, the Commissioner has the option of refusing to authorize issuance of a patent if he disagrees with the Board's decision, thus subjecting himself to a mandamus action by the applicant.

An amicus curiae brief from the Federal Circuit Bar Association (FCBA) raised the issues of Board independence and whether Alappat's due process rights had been violated by the Board's actions. The Alappat court rejected the argument that the Board operates independently because the plain language of § 7 permits the Commissioner to assign whomever he wishes to sit on a Board panel. The court dismissed the FCBA's due process argument because Alappat failed to raise the issue on appeal and due to the fact that the FCBA did not have standing to raise such an argument. In Alappat, the court ultimately concluded that resolution of the issue of whether the Board should operate independently of the Commissioner should best wait for Congressional action.

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167. Id. at 1534.
168. Id.
169. Id. at 1535. The Commissioner is not bound by a Board decision to grant a patent. Id. The Commissioner may refuse to sign the patent. Id. However, if the Commissioner does refuse, the applicant can bring a mandamus action in a Federal District Court seeking an order to force the Commissioner to sign. Id.
170. Alappat III, 33 F.3d at 1535-56.
171. Id.
172. Id. at 1536.
173. Id. The debate over Board independence existed prior to Akamatsu and Alappat III and continues even today. See, e.g., Amicus Curiae Brief of the Federal Circuit Bar Association, In re Alappat, 33 F.3d 1526, 1534 (Fed. Cir. 1994) (arguing in favor of the judicial independence of the Board and presenting a survey of the EICs indicating their dissatisfaction with the current appraisal system which objectively measures EIC performance based on quotas established by the PTO); Animal Legal Defense Fund v. Quigg, 932 F.2d 920, 928 (Fed. Cir. 1991) (stating that the Board's adjudicative authority is independent from the Commissioner's authority to establish regulations); 138 CONG. REC. S16,613-01,S16614 (1992) (statement of Sen. DeConcini) (emphasizing the inappropriateness of the Commissioner redesignating panels which have reached decisions contrary to his views); Request for Public Comments, 57 FED. REG. 34,123 (1992) (requesting comments on the structure and operation of the Board); Independence of the Board of Patent Appeals and Interferences, 2 FED. CIT. B.J. 215, 222 (1992) (presenting an analysis of Board independence and proposing alternative PTO practices and legislation); Senate Panel Considers Patent Reforms, Patent and Trademark Office Operations, 47 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1170, at 422 (Mar. 10, 1994) (discussing problems related to the previous Commissioner's interference with Board decisions and suggesting that Congress clarify the patent statutes); Commissioner Confers Title of 'Judge' on Patent and Trademark Board Members, 46 PAT. TRADEMARK & COPYRIGHT J. (BNA) No. 1151, at 534 (Oct. 21, 1993) (discussing the PTO's
III. CONGRESS CAN RESTORE THE INTENDED INDEPENDENCE OF THE BOARD BY REVISING § 7

Examination of the Congressional debate during the consideration of the Patent Act of 1927 indicates that Congress intended to prevent the Commissioner from influencing Board decisions. First, the Senate and House Committees specifically stated that the Commissioner does not possess authority to influence Board decisions. Second, although the issue of which Board members compose “The Board” which may grant appeals was not resolved, the Committees did make clear that “The Board” does not mean “The Commissioner.” Lastly, when Congress addressed the needs of the PTO in 1927 it did not foresee the changes in the size of the Board as it exists today. Given these points, Congress should modify the PTO appellate process to reflect the Board’s growth. The rationale of this view is addressed in this Section.

A. Congress Recognized the Need for the Board to Act as an Independent Judicial Body

The Senate and the House Committees on Patents determined separately that the Board of Patent Appeals should operate
Growing Pains for the Board independently of the Commissioner. The proposed amendments were intended to streamline the appellate process within the Patent Office by eliminating the direct appeal to the Commissioner. In addition, the Commissioner and two Assistant Commissioners joined the existing five EICs on the Board, thereby allowing two three-member panels to sit simultaneously. At the same time, a bill to increase the number of EICs to six was presented to Congress. The new structure gave the Board two full time panels and allowed the Commissioner and Assistant Commissioners to devote their time to other administrative duties.

In response to arguments supporting the Commissioner's participation in Board matters, both the House and Senate committees contemplated a Board free from the influence of the Commissioner. Karl Fenning, a supporter of the Commissioner's participation, argued that either the Commissioner or one of the Assistant Commissioners should participate in every hearing. Fenning reasoned that one dealing with the Patent Office might feel slighted if the Commissioner did not personally attend to his matter. The Senate rejected this argument, comparing the Board to the judicial system where a chief judge does not, and cannot, participate in every decision of the court. The Senate Committee also recognized that EICs pos-

181. Id.; see H.R. REP. NO. 1760, 69th Cong., 2d Sess. 1 (1927) (discussing the need to increase the staff in the Patent Office due to increases in patent applications and appeals). The amendment was approved as The Act of Feb. 14, 1927, ch. 139, § 1, 44 Stat. 1098.
182. Senate Hearing, supra note 174, at 21.
183. Senate Hearing, supra note 174, at 16-23 (statement of Karl Fenning); House Hearing, supra note 174, at 20-29 (statement of Henry D. Williams).
184. The speaker, Karl Fenning, was the Chairman of the Committee on Laws and Rules of the American Patent Law Association and had previously served as an Assistant Commissioner in the Patent Office. Senate Hearing, supra note 174, at 9, 16-17. Additionally, Fenning was a member of the committee that drafted the proposed legislation. Id. at 15.
186. The speaker, Karl Fenning stated, "the applicant will go to his Senator or his Congressman and complain, 'I have not been looked after by the commissioner; the head of the office has not considered this matter." Senate Hearing, supra note 174, at 18.
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The expertise necessary to handle the difficult cases.\textsuperscript{188} The House rejected Fenning's argument, by expressing their reluctance to "tie down" the Commissioner by forcing him to sit on Boards.\textsuperscript{189} Even the Commissioner of the Patent Office at the time of these hearings declined to support Fenning by noting that the ever-growing Patent Office workload required changing of the existing procedures to allow the Commissioner more freedom.\textsuperscript{190}

Furthermore, the proposed bill did not provide a mechanism for review of Board decisions reversing rejections by the examiners.\textsuperscript{191} Fenning also disagreed with this and expressed his fear that the Commissioner would lose some of his supervisory power if he did not possess the authority to force a reconsideration proceeding upon the applicant.\textsuperscript{192} Commissioner Robertson supported Fenning in this argument,\textsuperscript{193} but the House Committee flatly rejected their argument.\textsuperscript{194} The representatives reiterated the judicial character of the Board as well as the need for its independence from external influences.\textsuperscript{195}

\begin{itemize}
\item \textsuperscript{188} Id. at 18.
\item \textsuperscript{189} House Hearing, supra note 174, at 21-22 (statements of Mr. Otto Barnett, President American Patent Law Association, Chicago, Ill. and Mr. A. C. Paul, Chairman of the Patent Section of the American Bar Association).
\item \textsuperscript{190} Senate Hearing, supra note 174, at 15 (statement by Hon. Thomas E. Robertson, Commissioner of Patents). "The conditions are so vastly different that the procedure must be changed to meet the present conditions." Id.
\item \textsuperscript{191} See supra note 169 and accompanying text for a discussion of an applicant's right to a mandamus action where the Commissioner refuses to sign a patent.
\item \textsuperscript{192} Senate Hearing, supra note 174, at 19-20; House Hearing, supra note 174, at 22-28.
\item \textsuperscript{193} House Hearing, supra note 174, at 23-24 (statement by Commissioner Robertson). "I think it [a reconsideration forced upon an applicant] is a safety valve in extreme cases...." Id. at 24.
\item \textsuperscript{194} See id. at 25-26.
\item \textsuperscript{195} Id. The Representatives were very assertive in rejecting Fenning's view:
\begin{quote}
Mr. Hammer. You are going on the theory that these examiners sustain the same relation to the commissioner that the President's Cabinet does to the President? These other gentlemen are going upon the theory that these three men sitting at the hearing are an independent court and should not be restrained and no sword should hang over their heads, and that appeals to me very much. . . .
\end{quote}
\begin{quote}
That is an extreme view. Not that the three do it—that is what you have in your head, that is not a cabinet—those are independent judges with the same power and same authority he has, and they should be free to do as they think right without anybody that may reverse them except duly constituted authorities. . . .
\end{quote}
\begin{quote}
Mr. Rogers. Answering Mr. Perkins' suggestion, that was discussed at Denver, to erect an independent board of three judges who were not going to be reversed by outside authority. Those questions are essentially judicial and they ought to be. . . .
\end{quote}
\begin{quote}
The Chairman. I think Mr. Rogers is absolutely correct in this matter. I can not understand why if a board of three of these examiners hear and determine a case, somebody who has never heard this case at all should have
\end{quote}
The House Committee also emphasized that allowing the Commissioner to grant rehearings would fail to moderate the increasing workload of the Commissioner and the Board. Moreover, the House Committee recognized that granting the Commissioner such authority would serve to frustrate the remedial purpose of the bill. That is, if Congress allowed the Commissioner to require rehearings, the Act would merely rename the then existing appellate process, not eliminate it.

As shown above, the legislative history of the 1927 Patent Act indicates that Congress did not provide the Commissioner with the authority to grant either appeals or rehearings. Therefore, the Commissioner’s actions in Akamatsu and Alappat went beyond the scope of his authority. Moreover, the Board panels assembled by the Commissioner did not possess the power to render legally binding decisions. The composition of a Board panel must conform strictly to the provisions of the enabling statute to possess jurisdictional power to render a decision. The only group within the Patent Office with the authority to grant a rehearing is “The Board,” whomever that may be.

B. “The Board” Might be the Panel, Might be the Entire Board, but Definitely is Not the Commissioner

Although the last sentence of § 7(b) states that “only the Board . . . has the authority to grant rehearings,” the House and Senate Committees struggled over the issue of who should possess the authority to grant and decide rehearings. As a

the right to come in and grant a rehearing. It seems to me it would be up to the board to grant a rehearing if certain evidence was brought showing it ought to be done, and if not there ought not to be a rehearing.

Id. Such an unequivocal rejection of Fenning’s suggestion can leave no doubt about the intent of the House Committee.

196. Id. at 26 (statement by Edward S. Rogers, Chairman of the Patent and Trade Mark Association of the American Bar Association).

197. Id.

198. Id.

199. Alappat III, 33 F.3d at 1571-77 (Mayer & Michel, Jj., dissenting on the issue of jurisdiction) (reasoning that because the Commissioner did not act in accordance with the law, the reconsideration of a Board decision was not a decision of the Board within the meaning of 28 U.S.C. § 1295(a)(4)(A), and the court did not have jurisdiction over the merits of the appeal); In re Bose Corp., 772 F.2d 866, 869 (Fed. Cir. 1985) (stating the view that an improperly constituted board may not render a valid decision over which the court could exercise review jurisdiction).

200. Alappat III, 33 F.3d at 1571-77.

201. See Mc Claughry v. Deming, 186 U.S. 49, 62 (1902) (stating that a body or tribunal created by statute “must be convened and constituted in entire conformity with the provisions of the statute, or else it is without jurisdiction.”).


203. See Senate Hearing, supra note 174, at 19-23; House Hearing, supra note
general rule, rehearings are both granted and conducted by the same court or body that initially heard the case.\textsuperscript{204} During the hearings on the 1927 Patent Act, the House and Senate Committees used the term "board" interchangeably to denote both the three member panel and the entire eight or nine-member Board of Appeals.\textsuperscript{205} While never clearly stating whether "the Board" consisted of the panel assigned to an appeal or the entire Board, Congress never intended "the Board" to denote the Commissioner or any other subset of the Board of Appeals.\textsuperscript{206} The idea of the Commissioner granting rehearings was dismissed by both the House and Senate Committees as contrary to the purpose of the bill.\textsuperscript{207}

Today, proponents of the Commissioner's involvement in rehearings point to the Congressional intent to preserve the Commissioner's supervisory authority. Commissioner Manbeck believed that Congress reserved to him the power to dictate policy through Board decisions.\textsuperscript{208} In Alappat, Judge Rich focused on the supervisory authority of the Commissioner and his express

\begin{enumerate}
\item \textsuperscript{204} A rehearing is a:
\begin{itemize}
\item Second consideration of cause for purpose of calling to court’s or administrative board’s attention any error, omission, or oversight in first consideration.
\item A retrial of issues which presumed notice to parties entitled thereto and opportunity for them to be heard . . . Reconsideration of a case by the same court in which the original determination was made. . . .
\end{itemize}

\item \textsuperscript{205} House Hearing, supra note 174, at 26-27. The Chairman noted, "It seems to me it would be up to the board to grant a rehearing if certain evidence was brought showing it ought to be done. . . ." Id. In response, Mr. Bloom questioned, "What board?" Id. From later in the hearing:
\begin{itemize}
\item Mr. Perkins. When three members give a decision does the decision become the decision of the entire board?
\item Mr. Fenning. I understand it does.
\item Mr. Perkins. But you have a right under that clause to grant a rehearing of the entire board?
\item Mr. Fenning. No; it will be the members of the board that has the appeal.
\item Mr. Bloom. Where do you get that?
\item Mr. Fenning. Because the case has been assigned to those three members as representing the board.
\item Mr. Bloom. How do you get back to the full board?
\item Mr. Fenning. \textit{I do not go back to the full board.}
\end{itemize}
\textit{Id.} at 29 (emphasis added).

\item \textsuperscript{206} Senate Hearing, supra note 174, at 19-23; House Hearing, supra note 174, at 23-29.

\item \textsuperscript{207} See supra notes 178-201 and accompanying text for a discussion of Congress's intent to withhold the authority for the Commissioner to grant rehearings.

\item \textsuperscript{208} See supra notes 126-39 and accompanying text for a discussion of the Commissioner Manbeck's response to protests over his interference with Board independence.
\end{enumerate}
authority to designate board members in finding that the Commissioner acted properly. Chief Judge Archer approved the Commissioner's actions in *Alappat*, citing the express authority granted to the Commissioner by Congress to designate Board members and to form expanded panels.

Although the judge's arguments were well-reasoned and tracked the historical actions of the Patent Office, he ignored crucial aspects of the House and Senate Committee debates. In exchange for an increase in efficiency within the Patent Office, the Commissioner relinquished the power to control appeal decisions. Thus, the Commissioner does not possess the authority to dictate patent policy through control over the Board.

The reason for granting the Commissioner authority to designate panel members was meant to allow him to align the technical expertise of the Board members with the subject matter of the appeal, not to stack panels in his favor. In *Alappat*, Chief Judge Archer pointed out that the House and Senate "view[ed] the prospective legislation as permitting either the full board or less than the full board to rehear a case...." Perhaps this interpretation of the Commissioner's authority is reasonable given the circumstances within the PTO today. However, the House and Senate view of "less than the full board" meant only the original panel — nothing more and nothing less. Thus, when read in the context of the hearings, the legislative history confirms that the Commissioner exceeded his authority by granting rehearsings and designating predisposed panels in *Akamatsu* and *Alappat*.

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209. *Alappat III*, 33 F.3d at 1533-35.
210. *Id.* (Archer, C.J., concurring on the jurisdiction issue and dissenting on the merits).
211. *Id.* at 1549-50. See supra notes 174-201 and accompanying text for a discussion of the need to improve efficiency in the Patent Office.
213. *Senate Hearing*, supra note 174, at 21 (statement of A.C. Paul, Chairman of the Patent Section of the American Bar Association). Chairman Paul noted:

   And as my associate here suggests there may be a case that involves chemical patents, and another involving electrical patents, and the commissioner knows the qualities of these men and their capabilities, and he may assign to a certain case three men who are particularly skilled in a particular art.

*Id.*

214. See supra notes 227-30 and accompanying text for a discussion of Congress's intent in giving the Commissioner the authority to appoint panel members.
215. *Alappat III*, 33 F.3d at 1550.
C. Congress Must Clarify the Appellate Process in the Present-Day PTO by Amending § 7

The bill presented to Congress which constituted the Patent Act of 1927 was intended to address the backlog of appeals in the Patent Office existing in 1926 and 1927.217 The revised procedures resulting from its enactment allowed the then current staff in the Patent Office to reduce the duration of appeals within the office.218 The Senate and House hearings focused on the relationship between the Commissioner and the five or six EICs on the Board.219 The record is devoid of any discussions relating to future expansion in the Patent Office.220 The statute as it operates today does not address the needs of an office that has grown to over forty EICs.

The Commissioner and the Assistant Commissioner were added to the Board for the sole purpose of expediting appeals.221 With five EICs, the Commissioner or one Assistant would participate so two three-member panels could sit simultaneously.222 With the addition of a sixth EIC,223 three panels, each consisting of three members, could sit simultaneously if all members of the Board were available.224 Since 1927, the size of the Board has increased,225 providing greater flexibility in staffing Board panels.226 As such, the need for the participation of the Commis-

217. House Report, supra note 174, at 2-3. It was estimated that each year the Patent office received 80,000 to 90,000 patent applications, 1,900 appeals to the EICs, and 400 appeals to the Commissioner. Id. at 3. The turnaround time for appeals was estimated as at least nine months at the EICs level and six months at the Commissioner level. Id. at 2.


219. Id. at 20-21.


221. See Senate Hearing, supra note 174, at 20-21.

222. Id.


225. See supra note 220 (detailing the amendments that gradually enlarged the Board).

226. 35 U.S.C. § 7(c) (1988). In relevant part:

(c) Whenever the Commissioner considers it necessary, in order to keep current the work of the Board of Patent Appeals and Interferences, the Commissioner may designate any patent examiner of the primary examiner grade or higher, having the requisite ability, to serve as EIC for periods not exceeding six months each. An examiner so designated shall be qualified to act as a member of the Board of Patent Appeals and Interferences. Not more
sioner and the Assistant Commissioners has lessened.

The drafters of the bill intended to give the Commissioner the ability to efficiently allocate the resources of the Patent Office.\textsuperscript{227} This enabled the Commissioner to assign EICs to appeals based on the underlying subject matter of the application.\textsuperscript{228} With only five or six EICs, the Board was constrained by the lack of availability of EICs with the requisite skills to hear certain appeals.\textsuperscript{229} Today, however, appeal assignment is considerably more flexible and efficient since forty or more EICs and temporary EICs are available to hear appeals.\textsuperscript{230}

Furthermore, the debate over the meaning of “the Board” did not address the possibility that the Board would grow to almost fifty members.\textsuperscript{231} An eight or nine-member board can realistically convene and grant requests for rehearings. However, the appellate process would result in a substantial burden on the PTO if the more than forty EICs constituting “the Board” must personally address every request for rehearing. Therefore, § 7 should vest sole authority for granting rehearings in the original panel assigned to the appeal to make the appellate process manageable for the modern PTO.

The above analysis indicates that the Patent Office has outgrown the usefulness of the provisions of § 7 and the appellate process. Moreover, permitting the Commissioner to take control will return the PTO to the pre-Act of 1927 appellate process.\textsuperscript{232} Accordingly, the statute requires amendment to more clearly define the relationship between the Commissioner and the Board, in particular the judicial independence of the Board.

CONCLUSION

The proposed amendment to 35 U.S.C. § 7 set forth in the Appendix would clarify the roles of the Commissioner of the PTO

\begin{thebibliography}{9}
\bibitem{227} \\textit{Senate Hearing}, supra note 174, at 21.
\bibitem{228} \textit{Id.}; see supra note 214 (describing A.C. Paul’s concept of the proper use of authority by the Commissioner to appoint Board panels aligning EIC skills with appeal subject matter).
\bibitem{229} \textit{Senate Hearing}, supra note 174, at 20.
\bibitem{230} See \textit{Correspondence}, supra note 132, at 43 n.1. Generally, the members of the Board have expertise in either electrical, mechanical, or chemical disciplines. \textit{Id.} Panel assignments are made randomly within the technical discipline based on the subject matter of the appeal. \textit{Id.}
\bibitem{231} \textit{Senate Hearing}, supra note 174, at 19-23; \textit{House Hearing}, supra note 174, at 22-29.
\bibitem{232} \textit{House Hearing}, supra note 174, at 26 (statement by Edward S. Rogers).
\end{thebibliography}
and the Board of Patent Appeals and Interferences in processing appeals. The amendment will establish the Board as an independent quasi-judicial body, bound by the policies and procedures of the PTO, but free from interference by the Commissioner. Additionally, the Commissioner will retain control of PTO policy through a discretionary appeal to the CAFC of Board decisions that are contrary to PTO policy or judicial precedent. This amendment will put the appellate process in line with the intent of the drafters of the Act of 1927, and service the current and future needs of an ever expanding PTO.

Scott E. Baxendale
APPENDIX


(a) The examiners-in-chief shall be persons of competent legal knowledge and scientific ability, who shall be appointed to the competitive service classified civil service. The Commissioner, the Deputy Commissioner, the Assistant Commissioners, and the examiners-in-chief shall constitute the Board of Patent Appeals and Interferences.
(b) The Board of Patent Appeals and Interferences shall, on written appeal of an applicant, review adverse decisions of examiners upon applications for patents and shall determine priority and patentability of invention in interferences declared under section 135(a) of this title. Each appeal and interference shall be heard by a panel of at least three members of the Board of Patent Appeals and Interferences, who shall be designated by the Commissioner at random. Only the original panel designated to hear the appeal or interference has authority to grant rehearings.
(c) The Commissioner may, on written request of an examiner, appeal decisions of panels of the Board of Patent Appeals and Interferences approving applications for patents. The examiner must show that the panel decision is inconsistent with Patent and Trademark Office policy, Board of Patent Appeals and Interferences precedent, or judicial precedent.
(d) Whenever the Commissioner considers it necessary, in order to keep current the work of the Board of Patent Appeals and Interferences, . . .