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Texas Intellectual Property Law Journal
Fall 1999

Recent Developments

RECENT DEVELOPMENTS IN PATENT LAW

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I. Introduction

The cases discussed herein were reported in the United States Patent Quarterly or the Federal Circuit Advance Sheets during March through September 1999. The discussion is not intended to provide a comprehensive analysis of all patent decisions during the given period, but rather to provide a review of selected patent opinions that the ***72** author believes involve significant or noteworthy decisions in certain interesting areas of patent law. In addition, the discussion essentially has been limited to Federal Circuit and Supreme Court decisions. The selected cases discussed within this article are organized by subject matter, as set forth in the accompanying table of contents, to facilitate the reader's review.

II. Claim Construction Issues

In *Pitney Bowes, Inc. v. Hewlett-Packard Co.*,[1] the Federal Circuit reversed the district court's claim construction based upon the intrinsic record, while reiterating, and perhaps clarifying, its directives to district courts regarding the use of expert testimony in the context of claim construction issues.

Pitney Bowes appealed from the grant of summary judgment of non-infringement by the district court.[2] The Federal Circuit panel held that the district court incorrectly construed the claim term "spots" to mean "spots of light generated by a laser beam" instead of "spots of electrically discharged area on a photoreceptor."[3] Exercising *de novo* review, the Federal Circuit panel stated that based on its "review of the claims, written description and prosecution history of the patent-in-suit," it came to the conclusion that the district court erred.[4] Thus, the panel vacated the grant of summary judgment and remanded the case.[5]

The patent-in-suit, U.S. Patent No. 4,386,272, was titled "Apparatus and Method for Generating Images by Producing Light Spots of Different Sizes," which was generally directed toward laser printing technology, teaching ways of avoiding "jaggies" (*i.e.*, roughened edges in character formation by using toner dots of different sizes).[6] Pitney Bowes disclosed a method to vary toner dot size that involved attaching an intensity modulator to the light source.[7] The intensity of the light beam would affect the number of electrons displaced on the photoreceptor, which in turn would impact the size of the toner dot produced on the paper. Although Hewlett-Packard ("HP") used essentially the same light scanning system as Pitney Bowes, HP did not adjust the intensity of the light beam to affect toner dot size, but instead modified the pulse-width (*i.e.*, the length of time that the light beam remained in contact with the surface of the photoreceptor) of that beam.[8]

***73** The dispute between the two companies focused on the meaning of the term "spots of different sizes" as used in the claims at issue, and whether that phrase meant spots of light generated on the photoreceptor, as HP contended, or spots of discharged area on the photoreceptor that resulted from contact with the light beam, as Pitney Bowes contended.[9] The district court concluded that the plain language of the claims did *not* unambiguously support either proposed definition, but reasoned from the court's reading of the specification and prosecution history (including an examiner amendment of the patent's title) that the term meant what HP had contended.[10] The summary judgment of non-infringement naturally followed.[11]

The Federal Circuit panel walked through the claim language, the specification, and the prosecution history to reach the conclusion that the district court had incorrectly analyzed the intrinsic record.[12] For example, the panel relied upon the preamble of the claim in support of its construction, stating "[t]hat the claim term 'spots' refers to the components that together make up the images of generated shapes on the photoreceptor is only discernible from the claim preamble."[13] When the preamble states more than just the invention's field of intended use and gives meaning to ensuing claim language, a court should construe the preamble and the remaining claim language as an unified whole that is an internally consistent recitation of the claimed invention.[14]

Next, addressing the examiner's amendment to the patent's title during the prosecution, the panel found that the district court had attached too much significance in its claim construction to the title itself, as well as to the change made:
Thus, as indicated by the M.P.E.P., the purpose of the title is not to demarcate the precise boundaries of the claimed invention but rather to provide a useful reference tool for future classification purposes. In any event, if we do not read limitations into the claims from the specification that are not found in the claims themselves, then we certainly will not read limitations into the claims from the patent title....

The near irrelevancy of the patent title to claim construction is further demonstrated by the dearth of case law in which the patent title has been used as an aid to claim construction. ***74** …Consequently, that the patent title has only been mentioned once by this court in the context of claim construction and, even then, merely to make an illustrative point in one sentence, makes a powerful statement as to the unimportance of a patent's title to claim construction. It was therefore error for the

district court to impart as much weight in its claim construction as it did to the amendment of the title of the '272 patent.[15]

In addition, and perhaps most significantly, the Federal Circuit seemingly went out of its way to address the propriety of the district court considering expert testimony for purposes of its claim construction analysis.[16] Relying on extrinsic evidence to contradict the claim construction from the intrinsic evidence is a potential error.[17] However, the Federal Circuit did not doubt the district court's statements that it did not depend on extrinsic evidence in its claim construction.[18]

The district court used the written description and examiner's amendment to construe the claims.[19] However the court did address extrinsic evidence of a "common convention" in the digital printing field when Pitney Bowes made a collateral argument that HP's proferred construction would "exclude the preferred embodiment from being covered by the claims of the '272 patent."[20] The district court did not rely upon extrinsic evidence of this common convention to contradict the meaning of the claims that was apparent from intrinsic evidence.[21] Instead, the district court properly relied on intrinsic evidence to construe the claim and only briefly referred to extrinsic evidence when the court discussed Pitney Bowes' collateral argument.[22]

Thus, even though the proper claim construction in this case was premised upon the intrinsic record, Judge Michel, writing for the panel, took this opportunity to clarify an earlier decision that may have been being misquoted or misapplied by the trial courts. Recall that Judge Michel authored *Vitronics Corp. v. Conceptronic, Inc.*,[23] which was decided not long after *Markman v. Westview Instruments, Inc.*[24] Some have read *Vitronics* to mandate that district courts are prohibited from resorting to extrinsic evidence, such as expert testimony, unless the claim terms remain unclear after a thorough analysis of all available intrinsic evidence, a situation which should rarely occur.[25] Judge Michel stated clearly in *Pitney Bowes* that such a narrow reading of *Vitronics* was not intended. In ***75** particular, Judge Michel stated that "Vitronics does not prohibit courts from examining extrinsic evidence, even when the patent document is itself unclear. Moreover, Vitronics does not set forth any rules regarding the admissibility of expert testimony into evidence.…*[T]here are no prohibitions in Vitronics on courts hearing evidence from experts."*[26] *Vitronics* simply warns courts not to rely on extrinsic evidence in claim construction to contradict the meaning of claims discernible from the intrinsic evidence.

Therefore, it is entirely appropriate for a court to consult extrinsic evidence in order to ensure that its claim construction is not inconsistent with clearly expressed, appropriate, and widely held understandings in the relevant technical field, especially when dealing with technical terms, as opposed to non-technical terms in general usage or terms of art in claim-drafting.[27] A patent is both a technical and a legal document. While a court is equipped to interpret legal aspects of the document, the court must also interpret the technical aspects of the document from the vantagepoint of one skilled in the art.[28]

To make things perfectly clear, Judge Rader, with whom Judge Plager joined, in his "additional views" commented that "[an] appellate court, however, should refrain from dictating a claim interpretation process that excludes reliable expert testimony."[29] In his opinion, the process of claim construction at the trial court level benefits from expert testimony which might:

> (1) supply a proper technological context to understand the claims (words often have meaning only in context), (2) explain the meaning of claim terms as understood by one of skill in the art (the ultimate standard for claim meaning), and (3) help the trial court understand the patent process itself (complex prosecution histories—not to mention specifications—are not familiar to most trial courts).[30]

In this case, the trial court did not err by improper reliance on expert testimony.[31] Rather, the trial court erred in reliance upon the written description because the claim language admitted a broader reading. This resulted in claim construction having improper limitations stemming from the written description.[32]

***76 III. Infringement Issues**

A. Prosecution History Estoppel/Doctrine of Equivalents

In *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*,[33] the panel of Judges Rich, Newman, and Michel considered the case upon grant of certiorari by the Supreme Court, followed by vacatur and remand for further consideration in light of the

Court's decision in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*[34] The panel decision, written by Judge Newman, affirmed the district court's judgment with respect to infringement of one of the patents-in-suit, and vacated and remanded for further proceedings on the other patent-in-suit.[35] The panel decision considered (1) the all-elements rule, (2) equivalency in fact, and (3) prosecution history estoppel with respect to each of the patents-in-suit. However, the panel's decision was vacated to allow for an *en banc* rehearing.[36]

Despite the vacatur, the *Festo* panel's decision is worth noting for its discussion of the issue of prosecution history estoppel. In its opinion, the panel first recognized the teachings of *Warner-Jenkinson*:
The [Supreme] Court explained that the estoppel arises from amendments that were required to be made for reasons of patentability, and established a new presumption that when it is not clear from the prosecution record why an amendment was made, there is a presumption that the amendment was made for reasons of patentability.... This new presumption of estoppel is "subject to rebuttal if an appropriate reason for a required amendment is established." Thus the burden is shifted to the patentee. The court must consider the reason for the amendment and determine whether estoppel arises.... The Court stated:
"Where the reason for the change was not related to avoiding the prior art, the change may introduce a new element, but it does not necessarily preclude infringement by equivalents of that element."[37]

In this instance, although changes to the claims of the first patent (the Carroll patent) had been made during a reexamination proceeding, the panel found that changes relating in particular to the sealing rings were not made to overcome any rejections by the examiner, and thus were not required to be made for reasons of patentability.[38] Review of the prosecution history confirmed that the sealing rings were not even discussed during the reexamination prosecution.

***77** The defendant, SMC argued, however, that the amendment made during the reexamination adding the sealing rings claim element was enough by itself to raise a presumption of an estoppel, The panel rejected such a "wooden" approach, stating: "a voluntary amendment not accompanied by argument or representations relevant to patentability, does not necessarily generate an estoppel, any more than do the claims as originally filed."[39]

For the Carroll patent, the panel found that the changes regarding the claimed sealing rings were voluntary, not made in response to an examiner's rejection.[40] In addition, the panel found that such rings were known in the prior art. Since the seal rings were not at issue during the reexamination, either through argument or rejection, and since the examiner's stated grounds for allowance were unrelated to the sealing rings, no estoppel was deemed to have arisen.[41]

With respect to the other patent-in-suit (the Stoll patent), the panel went through the same analytical framework, again concluding that the all-elements rule had been met and that equivalency in fact was not disputed below.[42] When reaching the prosecution history estoppel issue, however, the panel found that a factual issue arose, and therefore remanded the matter for further proceedings.[43]

Specifically, the Stoll patent had been filed in the United States as an English-language counterpart of a German patent application.[44] In the first office action, the examiner had raised no rejections based on prior art, but had raised section 112 issues.[45] In response, the applicant had rewritten the claims and clarified the nature of its claimed invention. While no explanation was given for the specific claim changes, the applicant stated:

> Applicant wishes to make or record German Offenlegengsschrift No. 27 37 924 and German Gebrauchsmuster No. 19 82 379. These references were cited in the first Office Action received in the corresponding German application. These references are obviously clearly distinguishable over the subject matter of the claims now present in this application. Accordingly, further comment about the subject matter of these references is believed unnecessary. It is clear that neither of these references discloses the use of structure preventing the interference of impurities located inside the tube and on the outside of the tube while the arrangement is moved along the tube.[46]

***78** Thereafter, no rejection was made by the examiner as to patentability, and no other arguments or amendments were made by the applicant. The panel found:

> [A]s to the element of the sealing rings, the prosecution history raises an unresolved issue. The applicant's reference to the wiping function, in the letter accompanying the amendment, raises the issue of whether this amendment was made for reasons of patentability, or whether the *Warner-Jenkinson*

presumption arises and can, or can not, be rebutted.[47]

On August 20, 1999, in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*,[48] the Federal Circuit granted a petition to rehear the appeal *en banc*, and vacated the panel's prior decision.[49] The Court requested briefing on the following five questions:

1. For the purposes of determining whether an amendment to a claim creates prosecution history estoppel, is "a substantial reason related to patentability," *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33 (1997), limited to those amendments made to overcome prior art under § 102 and §103, or does "patentability" mean any reason affecting the issuance of a patent?

2. Under *Warner-Jenkinson*, should a "voluntary" claim amendment—one *not* required by the examiner or made in response to a rejection by an examiner for a stated reason—create prosecution history estoppel?

3. If a claim amendment creates prosecution history estoppel, under *Warner-Jenkinson* what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?

4. When "no explanation [for a claim amendment] is established," *Warner-Jenkinson*, 520 U.S. at 33, thus invoking the presumption of prosecution history estoppel under *Warner-Jenkinson*, what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?

5. Would a judgment of infringement in this case violate *Warner-Jenkinson's* requirement that the application of the doctrine of equivalents "is not allowed such broad play as to eliminate [an] element in its entirety," 520 U.S. at 29. In other words, would such a judgment of infringement, post *Warner-Jenkinson*, violate the "all elements" rule?[50]

The answers to these important questions undoubtedly will not only impact future patent litigation, but also the manner in which patents are prosecuted from the outset before the PTO.

On June 8, 1999, in between the *Festo* panel decision and the grant of a rehearing, two other Federal Circuit panels decided cases dealing with prosecution history estoppel issues.

In *Augustine Medical, Inc. v. Gaymar Industries, Inc.*,[51] the panel of Judges Mayer, Rader, and Gajarsa, with Judge Rader writing the opinion, reversed a jury verdict of infringement under the doctrine of equivalents and the district court's refusal to grant ***79** JMOL. The panel held that the plaintiff was estopped from asserting a range of equivalents for infringement purposes that it had surrendered during prosecution of the patents-in-suit or during prosecution of earlier related patent applications.[52]

The panel stated that application of prosecution history estoppel was a question of law for which the Federal Circuit owed no deference to a district court's analysis.[53] The standard to be applied was whether a competitor could reasonably conclude that an applicant had surrendered the subject matter now sought to be covered under a doctrine of equivalents analysis.[54] Such a surrender of subject matter, according to the panel, could arise through claim amendments or arguments. For example, a patentee could be estopped from arguing equivalence for subject matter that was deemed unpatentable in view of some prior art during prosecution. Similarly, a patentee could be prohibited from arguing equivalence of a so-called "trivial variation" of a distinguished piece of prior art.[55]

In this situation, the panel found that during prosecution of the parent application, the patentee had canceled or amended all of the original claims in favor of new claims containing the specific limitation now sought to be broadened under the guise of an equivalents allegation.[56] Further, these earlier changes were made in response to the examiner's rejections over prior art. Because this same claim limitation was used in the claims of the later-issued patents-in-suit, the panel invoked an estoppel.[57]

In the second case, *Loral Fairchild Corp. v. Sony Corp.*,[58] the panel of Judges Michel, Archer, and Plager, with Judge Archer writing the opinion, affirmed the trial court's[59] determinations regarding non-infringement and prosecution history estoppel. After construing the claims at issue, the trial court granted summary judgment of no literal infringement,[60] but denied such judgment as to the doctrine of equivalents. Then, after a jury verdict of infringement, the trial court granted JMOL based on, among other things, prosecution history estoppel.[61]

***80** The Federal Circuit panel analyzed the prosecution history estoppel issue *de novo*.[62] It found that in this situation a rebuttable presumption of estoppel (per *Warner-Jenkinson*) would not apply because the applicant had provided an explanation regarding the amendments made.[63] Nonetheless, the panel said that the reasoning behind the amendments had to be examined in the context of the entire record to determine what, if anything, had been surrendered during prosecution.[64]

The panel concluded that an applicant may not hide the fact that the amendment was made in response to prior art by discussing the amendment as if it were made in response to a section 112 indefiniteness rejection.[65] If this were allowed, applicants would attempt to avoid the creation of prosecution history estoppel by disguising amendments made in response to section 102 or 103 rejections as if the amendments were made in response to a section 112 rejection.[66]

B. Section 112 Paragraph 6

In *Rodime PLC v. Seagate Technology, Inc.*,[67] a Federal Circuit panel consisting of Judges Rader, Lourie, and Friedman reversed a grant of summary judgment for non-infringement on the basis that the district court had misinterpreted the claims at issue by reading limitations from the specification into those claims.[68] Originally, Rodime brought suit against Seagate for infringement of U.S. Patent No. 4,638,383, which relates to the miniaturization of computer hard drives to 3 ½ inches and the technological problems associated with such shrinking.[69] In addition, Rodime brought state tort claims related ***81** to Seagate's alleged interference in certain licensing negotiations between Rodime and third parties.[70]

The district court's non-infringement judgment centered on the court's construction of the claim term, "positioning means," which the court interpreted to be a means-plus-function element under section 112, paragraph 6.[71] As a result, the court limited the positioning means to require the inclusion of some sort of thermal compensation system because in the specification, the positioning means included an additional function of thermal compensation to accurately locate the proper disk position. Under such an interpretation, Seagate's product did not literally infringe because its product employed a separate element, a thermal pin, to compensate for thermal differentials.[72]

The Federal Circuit panel reversed, finding that the district court had improperly interpreted thermal compensation to be a function of the claimed positioning means.[73]. The panel explained, "[i]n so construing the claims, the district court erred by importing the functions of a working device into these specific claims, rather than reading the claims for their meaning independent of any working embodiment."[74] Because the claim itself made no reference to accurate positioning on the disk, such a limitation should not be read into the claim, irrespective of the fact that the specification discussed thermal compensation as an embodiment of the invention.[75]

Furthermore, according to the panel, the district court improperly found positioning means to be a means-plus-function element.[76] The plain language of the claim cited the function of the positioning means as "moving said transducer means between the concentrically adjacent tracks," and further cited the structure underlying the positioning means and the location and interconnection of the sub-elements.[77] The panel noted that "[t]his detailed recitation of structure for performing the moving function takes the claim ***82** element out of the scope of § 112, ¶ 6."[78] That the claim did not recite every last detail of structure disclosed in the specification was not determinative because the claim needed only to recite "sufficient structure to perform entirely the claimed function."[79]

In *Odetics, Inc. v. Storage Technology Corp.*,[80] a Federal Circuit panel consisting of Judges Lourie, Clevenger, and Schall revisited the appropriate analysis for structural equivalence under 35 U.S.C. § 112, ¶ 6.[81] The district court initially denied the defendant's JMOL request and let the jury's verdict of literal infringement stand, but then, *sua sponte*, in light of the Federal Circuit's decision in *Chiuminatta Concrete Concepts, Inc. v. Cardinal Industries, Inc.*,[82] reconsidered its JMOL decision and reversed the infringement verdict.[83]

The Federal Circuit panel reversed the district court and reinstated the jury verdict, holding that "*Chiuminatta* did not mark a change in the proper infringement analysis under § 112, paragraph 6."[84] The district court read *Chiuminatta* to hold that section 112, paragraph 6 required "component by component" equivalence between the structure in the patent and the portion of the device asserted to be structurally equivalent.[85] The panel explained that the district court's reading was incorrect because it misapprehended section 112, paragraph 6 infringement analysis.[86]

In clarifying the proper approach, the Federal Circuit panel first spelled out the general guidelines for literal infringement

analysis when a claim limitation has been written in means-plus-function form under section 112, paragraph 6.[87] Literal infringement of a means-plus function claim limitation requires: (1) functional identity and (2) either structural identity or equivalence between the relevant structure in the accused device and the corresponding structure in the patent specification.[88] Next, the panel examined structural equivalence, the second requirement for literal infringement of a means-plus-function claim.

***83** The panel explained that structural equivalence analysis under section 112 paragraph 6 was "an application of the doctrine of equivalents…in a restrictive role."[89] Both tests for equivalence analyze the insubstantiality of differences. The doctrine of equivalents looks to see how substantial the differences are in "function, way, or result" of the alleged substitute structure from that described by the claim limitation.[90] However, this analysis is not fully transferable to structural equivalence found in section 112, paragraph 6.[91] Before structural equivalence can even be examined, it must be established that the alleged substitute structure has an *identical* function to that found in the means-plus-function claim limitation.[92] Thus, structural equivalence is more limited than the doctrine of equivalence because functional identity is required. Under structural equivalence, only the differences in the "way" the alleged substitute structure performs the claimed function and the "result" of that performance is compared to the corresponding structure described in the patent specification.[93] Structural equivalence is met only if these differences are insubstantial.[94]

Then, the panel turned to the issue at hand: whether component-by-component analysis of structural equivalence was the proper analysis. The panel concluded that a component-by-component analysis of structural equivalence was not warranted even though structural equivalence looks to insubstantial differences similarly to the doctrine of equivalence.[95] Instead, structural equivalence would be part of a literal infringement analysis of a means-plus-function claim limitation, where the limitation must be met for infringement to lie. The panel noted that "such a limitation is literally met by structure, materials, or acts in the accused device that perform the claimed function in substantially the same way to achieve substantially the same result."[96] In such a case, the claim limitation would be the overall structure corresponding to the claimed function rather than the individual components that comprised the overall structure.[97] Thus, "structures with different numbers of parts may still be equivalent under § 112, paragraph 6, thereby meeting the claim limitation."[98] Therefore, the panel majority concluded that the component-by-component breakdown undertaken by the district court on reconsideration was flawed.

***84** Judge Lourie, in dissent, expressed a contrary view:
If one is to determine whether the disclosed structure of a claimed means is equivalent to the corresponding structure of an accused device, I do not see how it is possible to do so without looking at what components the structures consist of, *i.e.*, by deconstructing or dissecting the structures. This is the only way to discern whether any significant difference in structural details exists between the claimed and accused structures....

My difference with the majority essentially arises from my belief that it misunderstands the meaning of the word "structure."…Analyzing any of these structures for comparison with other structures requires analysis of their component parts. We need to focus on the real meaning of this statutory term if we are to serve our function of clarifying the law.[99]

Judge Lourie would have upheld the district court's conclusion on reconsideration because, while the patentee did establish functional identity between the claim language and the accused product, there was no showing of structural equivalence.[100] Along these lines, Judge Lourie stated that expert testimony regarding interchangeability of the patented structure and the accused structure was not sufficient to establish structural equivalence.[101]

IV. Validity Issues

A. Section 101

A panel of the Federal Circuit examined the scope of section 101 of the Patent Act in *AT&T Corp. v. Excel Communications Inc.*[102] AT&T sued for infringement of U.S. Patent No. 5,333,184, titled "Call Message Recording for Telephone Systems," which involved a message record for long distance telephone calls that is designed to operate in a telecommunications system with multiple long-distance service providers.[103] The claimed device indicates the long-distance service provider of a caller, thereby facilitating differential billing treatment. The district court held the '184 patent invalid for failure to claim statutory subject matter under 35 U.S.C. § 101, concluding that the method claims simply recited a mathematical algorithm and thus

involved no patentable "step."[104]

On appeal, the Federal Circuit panel of Judges Plager, Clevenger, and Rader reversed, finding that the district court had misapplied section 101.[105] The panel recognized that, taken alone, a mathematical algorithm generally has been regarded as ***85** unpatentable subject matter.[106] Changes in both law and technology, however, have caused a reevaluation of this issue and a broadened interpretation of section 101, such that a mathematical algorithm may indeed be patentable material if it can be reduced to some practical application rendering it "useful."[107] Analyzing the '184 patent, the panel found that the claimed method was useful.[108] Although the '184 patent used a simple mathematical formula to determine the particular long-distance carrier at issue, it used this information for a practical, useful result and therefore would be patentable. The panel found that "[b]ecause the claimed process applies the Boolean principle to produce a useful, concrete, tangible result without pre-empting other uses of the mathematical principle, on its face the claimed process comfortably falls within the scope of § 101."[109]

Another panel of the Federal Circuit, consisting of Judges Rich, Schall, and Bryson, addressed the scope of section 101 in *Juicy Whip, Inc. v. Orange Bang, Inc.*[110] *Juicy Whip* involved the validity of U.S. Patent No. 5,575,405, which claimed a post-mix beverage dispenser designed to simulate a pre-mix beverage simulator.[111] The '405 patent required that the post-mix dispenser contain a transparent bowl that simulated the appearance of the beverage to be dispensed, creating the visual image that the bowl was the principle source of the dispensed beverage.[112]

The district court held that the patent was invalid under section 101, concluding the invention lacked utility because its purpose was to increase sales though deception, namely, imitating another product.[113] The district court relied upon two early Second Circuit opinions in support of its holding, *Rickard v. Du Bon*[114] and *Scott & Williams, Inc.* ***86** *v. Aristo Hosiery Co.*[115] In each of those cases, the Second Circuit invalidated a patent involving some manner of "deception."[116]

The Federal Circuit panel in *Juicy Whip*, however, reversed, holding that *Rickard* and *Aristo Hosiery* were no longer good law.[117] The panel explained, "that one product can be altered to make it look like another is in itself a specific benefit sufficient to satisfy the statutory requirement of utility."[118] As examples, the panel discussed the utility of such products as cubic zirconium, imitation gold leaf, and imitation leather, noting that much of their value derives from the fact that they appear to be something they are not.[119] Similarly, in this case the claimed post-mix dispenser was deemed to be useful in that it embodied the features of a post-mix dispenser while imitating the appearance of a premix dispenser.

B. Section 102

In *Abbott Laboratories v. Geneva Pharmaceuticals, Inc.*,[120] a Federal Circuit panel, consisting of Judges Plager, Lourie, and Bryson, affirmed the district court's grant of summary judgment that the asserted claim was invalid under the on-sale provision of 35 U.S.C. § 102(b).[121] It was undisputed that a non-party company had made at least three commercial sales of a particular form of terazosin hydrochloride anhydrate in the United States well in advance of the critical date for the patent-in-suit.[122] The non-party company had not manufactured the materials, but rather, had merely purchased them from certain foreign manufacturers and then resold them in the United States. In addition, the sales invoices did not specify the particular crystalline form that was being sold. Thus, at the time of the sales in the U.S., the parties involved did not know the identity of the particular material with which they were dealing.[123]

The issue addressed by the panel was whether for section 102(b) on-sale purposes it was necessary for the parties to the sale to have conceived or known precisely the nature of the subject matter with which they were dealing.[124] The panel held that the parties' ignorance that they were dealing with a particular crystalline form was irrelevant ***87** to the analysis.[125] The invention would be considered on-sale as long as the offered product inherently possessed each of the claim limitations, whether or not the parties to the sale recognized that the product possessed these claimed characteristics.[126] In this case, significant quantities of Form IV treason anhydrate were publicly sold in the United States in 1989-90 and in 1991 and were thus in the public domain when Abbott filed its application in October 1994.[127]

C. Corroboration

In *Finnigan Corp. v. U.S. International Trade Commission*,[128] Judge Lourie authored the panel opinion (on behalf of himself and Judges Michel and Rich) that involved the need for corroborating evidence to support a single witness' testimony used to

invalidate a patent claim, irrespective of the witness' level of interest in the litigation.[129] In the underlying ITC investigation, the Administrative Law Judge ("ALJ") had concluded that an article authored by the witness (the Jefferts Article) anticipated certain claims at issue. In arriving at that conclusion, the ALJ had relied upon inherency principles and had gained his understanding of the knowledge of one skilled in the art solely from one witness, Jefferts.[130] In addition, the ALJ concluded, relying primarily on the witness' testimony as evidence, that the claims were anticipated from prior public use by the same witness.[131]

The Federal Circuit panel, after reviewing portions of the trial transcript, found the witness' testimony to be "far from unequivocal" concerning the knowledge that one skilled in the art would have been expected to have, and thus not sufficient to meet the "clear and convincing" standard of proof.[132]

Turning to the alleged public use, the panel reiterated the long-standing disfavor toward uncorroborated testimonial evidence to invalidate a patent.[133] Moreover, according to the panel, invalidating activities would normally be expected to result in ***88** some tangible evidence, such as documents, schematics, or the like.[134] As a result, the panel clearly held that a witness' uncorroborated testimony is suspect as clear and convincing evidence in the context of the various section 102 subsections.[135] Previously, courts have held that in the context of section 102(f) (derivation) and section 102(g) (priority), "the case law is unequivocal that an inventor's testimony respecting facts surrounding a claim of derivation or priority of invention cannot, standing alone, rise to the level of clear and convincing proof."[136] The panel noted that there was no principled reason why this principle should not apply to other subsections: "a witness' uncorroborated testimony is equally suspect as clear and convincing evidence if he testifies concerning the use of the invention in public before invention by the patentee (§ 102(a)), use of the invention in public one year before the patentee filed his patent (§ 102(b)), or invention before the patentee (§ 102(g))."[137]

Moreover, corroboration is necessary regardless of whether the testifying witness is an interested party in the litigation or an uninterested non-party.[138] In reconciling *Thomson S.A. v. Quixote Corp.*[139] and *Woodland Trust v. Flowertree Nursery*,[140] the panel recognized that the witness' level of interest is an important consideration when the witness provides testimony to corroborate another's testimony.[141] However, the panel clarified that those two cases do not stand for the proposition that only testimony from an interested witness requires corroboration. Instead, corroboration is required for any witness whose testimony alone is asserted to invalidate a patent.[142]

As a result, the panel concluded that Jefferts' testimony alone was not adequate to prove prior public use.[143] Without any corroboration, such evidence was insufficient as a matter of law to invalidate the patent under the prior use doctrine. Also, the panel noted that its judgment did not mean that Jefferts' testimony was "incredible," but it simply meant that testimony alone cannot overcome the clear and convincing evidence standard imposed in proving patent invalidity.[144]

***89** In *Oney v. Ratliff*,[145] a Federal Circuit panel reversed the grant of summary judgment of invalidity and remanded the case back to the district court for further fact finding.[146] The accused infringer had moved for summary judgment under 35 U.S.C. §102(a) and §102(g) based upon its own alleged invention and sale of the accused products prior to the patentee's invention date.[147] According to the panel, the documents relied upon by the defendant were susceptible to different interpretations, and the affidavits of other witnesses were dubious at best.[148]

The panel held that the district court was incorrect when the court failed to apply the *Woodland Trust* factors to address corroboration.[149] Previously, the district court determined that the plaintiff had failed to provide countervailing evidence, and the court reasoned that the factors to address corroboration were unnecessary, as *Woodland Trust* was limited to its unique facts.[150] The Federal Circuit panel rejected this reasoning and held that the *Woodland Trust* factors were relevant for corroborative purposes.[151] The uncorroborated testimonies of the infringer, as the inventor of the accused products, and his close associates were insufficient to prove patent invalidity.[152]

V. Damages Issues

In *Grain Processing Corp. v. American Maize-Products Co.*,[153] a Federal Circuit panel affirmed the district court's decision awarding the patentee a reasonable royalty rather than damages premised on lost profits.[154] Judge Rader, writing for the panel that included Judges Friedman and Bryson, noted that this case had spanned more than 18 years, including eight prior judicial decisions, three of which had been by the Federal Circuit.[155] During this extended time period, the defendant, American Maize, had sold maltodextrins (starch hydrolysates that have a dextrose equivalence ("D.E.") of less than 20—D.E. is a

percentage measurement of the reducing sugars content that reflects the degree to which starch is broken down and converted into dextrose); however, over that span American Maize had utilized four different processes to produce the accused ***90** products.[156] The slight chemical differences in each process played a significant role in the lost profits analysis.[157]

Tracking through the historical record, American Maize used a first process (Process I) for roughly 7 years before being sued for infringement by Grain Processing.[158] A year or so into the lawsuit, American Maize changed its process by reducing the amount of a certain enzyme and extending the reaction time in order to lower its production costs (Process II), and this process was used for roughly 6 years.[159] American Maize contended that neither of these two processes infringed the asserted claim (claim 12) because neither have a "descriptive ratio greater than about 2," as called for in that claim.[160]

Descriptive ratio ("D.R.") is inversely proportional to D.E.[161] Different scientific tests, however, yield slightly different D.E. measurements, which in turn affect the D.R. values derived from those measurements.[162] Grain Processing used one type of test (the Schoorl test) to measure the D.E., whereas American Maize used another test (the Lane-Eynon test), with differing results. Under the Lane-Eynon test, American Maize believed that it did not infringe claim 12 because all of its test results showed a D.R. of less than 1.9. Grain Processing's Schoorl tests on the same samples, however, revealed a D.R. greater than 2.[163]

After the district court found no infringement, the Federal Circuit reversed, and the district court subsequently granted an injunction.[164] Neither court dealt with the discrepancy between the two tests for measuring D.E. value.[165] In response to the injunction, American Maize developed another process (Process III) by adjusting certain chemical parameters and used this third process for about 3 years.[166] After Grain Processing learned of the third process and did additional tests using its D.E. test method, Grain Processing filed a contempt motion against American Maize.[167] American Maize believed that its Process III did not infringe, based primarily on test results using its ***91** preferred D.E. test method. The district court initially held American Maize in contempt, but then the court changed its ruling by allowing American Maize to establish noninfringement by any acceptable scientific method, which they were able to do using their preferred D.E. (Lane-Eynon) test method.[168] The Federal Circuit reversed, holding that the prosecution history of Grain Processing's patent referenced the Schoorl test to measure D.E., which meant that the Schoorl test should have been used to determine the relevant values for infringement purposes.[169]

As a result, American Maize developed a fourth process (Process IV) that indisputably produced non-infringing products, and which had no discernable differences relative to the earlier products.[170] Significantly, from the time that American Maize began experimenting to develop Process IV, it took only two weeks to perfect the reaction and begin commercial production.[171] They did not have to change any equipment, source starches, or other ingredients from Process III, but only had to slightly adjust the amounts of certain ingredients, the heat, and the time involved. American Maize had not made these changes earlier because of the higher cost of Process IV, although they could have under known technology before the patent-in-suit issued.[172]

With respect to the damages issues, Grain Processing claimed lost profits based on lost sales, price erosion, and American Maize's accelerated entrance into the market (after the patent expired, American Maize was able to quickly switch back to the cheaper Process III).[173] Grain Processing claimed that any sales not subject to a lost profits analysis should be subject to a 25% reasonable royalty. To recover lost profits based on lost sales, Grain Processing had to show a reasonable probability that it would have made the asserted sales "but for" the infringement.[174] Once this was shown, the burden then shifted to the accused infringer, American Maize, to show that this claim was unreasonable, such as by showing there was an available substitute.[175] The district court determined that Grain Processing could not establish lost profits because American Maize could have produced a noninfringing substitute using Process IV.[176] The district court denied lost profits and determined that a 3% royalty on all infringing products was adequate to compensate Grain Processing.[177]

***92** On appeal, the Federal Circuit panel reversed and remanded, observing that "the mere fact of switching to a non-infringing product years after the period of infringement [does] not establish the presence of a non-infringing substitute during the period of infringement.... [A] product or process must be 'available or on the market at the time of infringement' to qualify as an acceptable non-infringing substitute."[178] On remand, the district court once again denied the lost profits claim, finding that Process IV was "available" during the infringement period.[179]

On a subsequent appeal, the Federal Circuit panel finally affirmed the trial court's conclusions. Judge Rader explained:
American Maize concedes that it did not make or sell Lo-Dex 10 from Process IV until 1991, after the period of infringement. However, an alleged substitute not "on the market" or "for sale" during the infringement can figure

prominently in determining whether a patentee would have made additional profits "but for" the infringement. As this court stated in Grain Processing VII, "to be an acceptable non-infringing substitute, the product or process must have been available or on the market at the time of infringement." This statement is an apt summary of this court's precedent, which permits available alternatives—including but not limited to products on the market—to preclude lost profits damages.[180]

In looking at whether Process IV was, in fact, available to American Maize, the Federal Circuit panel indicated that the relevant time period to consider was the period of infringement for which damages were recoverable, *i.e.*, the accounting period.[181] Further, when an alleged non-infringing substitute is *not* on the market during the accounting period, the court may infer that it was not available at that time. The accused infringer then must come forward and show that the alleged substitute was in fact available during the accounting period.[182]

In this situation, the district court found that American Maize could have readily obtained the necessary materials to make Process IV during the accounting period and that the effects of the ingredients, as modified in Process IV, were known in the art.[183] In addition, the district court found that American Maize had all the necessary equipment and know-how to use Process IV during the relevant period. American Maize had not switched to Process IV because of economic reasons (*i.e.*, higher costs) and because they reasonably believed that the earlier processes did not infringe Grain Processing's patent.[184]

***93** Also, the district court found that there was no "economically significant demand for a product having all of the [claimed] attributes."[185] The Federal Circuit panel noted that the district court's finding, which was unchallenged on appeal, further supported the availability holding. Since consumers found certain claimed elements to be irrelevant, the prospect of an available and acceptable substitute product was expanded because a competitor could drop or replace the irrelevant elements from the product.[186] In other words, since Grain Processing did *not* have a patent claim covering the base (economically significant) product, but rather only covering a particular version of that base product, its claim for lost profits was unsupported.

VI. Other Issues

A. Sovereign Immunity

The Supreme Court held that states and state agencies were immune from claims of patent infringement in federal courts in *Florida Prepaid Postsecondary Education Expense Board v. College Savings Bank*.[187] College Savings Bank sued Florida Prepaid, a Florida state entity, for patent infringement after the patent laws were amended by the Patent and Plant Variety Protection Remedy Clarification Act ("Act"),[188] which expressly abrogated the states' sovereign immunity.[189] During the pendency of the lawsuit, the Supreme Court decided *Seminole Tribe of Florida v. Florida*,[190] and thereafter Florida Prepaid moved to dismiss the action, arguing that the Act was an unconstitutional attempt by Congress to use its Article I powers to abrogate state sovereign immunity.[191] College Savings argued that Congress had properly exercised its authority under section 5 of the Fourteenth Amendment.[192] The district court denied the motion to dismiss, and the Federal Circuit affirmed.[193]

The Supreme Court reversed the decisions of the lower courts when the Court held that the Act's abrogation of states' sovereign immunity was invalid.[194] Since Florida had ***94** not expressly consented to being sued or waived its immunity by implication, the Court had to determine whether Congress had validly abrogated the states' immunity. The standard for that determination was two-part: (1) whether Congress had unequivocally expressed an intent to abrogate, and (2) whether Congress had acted under valid authority in so doing.[195] Answering the first part, the Court said that Congress had indeed intended to abrogate states' immunity in the Act, as indicated by express statements therein.[196] The issue, therefore, turned on the second part of the test, whether Congress in fact had the power to do so. In *Seminole Tribe*, the Supreme Court held that although Congress did not have the power to abrogate states' immunity under Article I of the Constitution, it could exercise such power under section 5 of the Fourteenth Amendment.[197] To be a valid exercise of power under section 5, however, the legislation must be remedial in nature, *i.e.*, Congress must identify conduct transgressing the Fourteenth Amendment's provisions and must tailor the legislation to remedy the prior transgressions.[198]

In this situation, the Supreme Court found that unremedied patent infringement by the states did not rise to a pattern of constitutional proportions.[199] In addition, Congress did not adequately consider the availability of sufficient state remedies for any such patent infringement. The explicit reasons provided for the Act, national uniformity of patent law and access to a

convenient forum, are more properly factors under an Article I analysis, not a Fourteenth Amendment analysis.[200] Because the legislative record suggested that Congress was not acting to remedy a history of widespread or persisting deprivation of constitutional rights and because the Act was not limited to apply to cases involving alleged constitutional violations, the Court concluded that it was not a valid exercise of Congress' Fourteenth Amendment powers and, thus, was invalid.[201]

***95 B. Collateral Estoppel**

In *Pharmacia & Upjohn Co. v. Mylan Pharmaceuticals, Inc.*,[202] a Federal Circuit panel affirmed the district court's ruling that the plaintiff was collaterally estopped from asserting an infringement claim as a result of a prior (essentially co-pending) judgment of invalidity and unenforceability of the patent-in-suit.[203] In deciding whether the patentee had a full and fair opportunity to litigate those issues in the other case, as required under *Blonder-Tongue Laboratories, Inc. v. University of Illinois Foundation*,[204] the Federal Circuit panel gave weight to the comprehensive opinion issued by the other district court, the detailed legal analysis on the validity and enforceability issues, the length of the trial that was had, and the correctness of the jury instructions given.[205] In response to the patentee's argument that the district court in this case should have stayed its proceedings, the Federal Circuit panel disagreed, holding that the district court properly applied collateral estoppel despite the possibility of an appeal or the pendency of a motion for JMOL/new trial in the other case.[206] Because there was scant Fourth Circuit precedent on point, the Federal Circuit looked to other circuits and learned treatises to conclude that the Fourth Circuit (in which the district court resided) would have ruled similarly on this procedural issue.

In *Burke, Inc. v. Bruno Independent Living Aids, Inc.*,[207] a Federal Circuit panel held that a party may rely upon the prior construction of a patent claim rendered as a matter of law by the Federal Circuit, irrespective of the fact that the court's decision might be unpublished and non-precedential.[208] In this situation, a Federal Circuit panel had previously interpreted a claim of the patent-in-suit, but the resulting construction was contained in an unpublished opinion.[209] The plaintiff argued that the trial court should adopt this previous claim construction. The defendant, on the other hand, alleged that use of a non-precedential opinion violated Federal Circuit Rule 47.6(b), which precludes the employment or citation of non-precedential opinions as precedent.[210] The Federal Circuit panel noted that Rule 47.6(b) does not provide a blanket prohibition on the use of all non-precedential opinions; rather, Rule 47.6(b) permits citation of such opinions in limited circumstances.[211] The panel held, therefore, that it was "not improper under Rule 47.6 ***96** to cite to [the non-precedential opinion] and discuss and rely on this court's claim construction in that case."[212]

C. Appellate Jurisdiction

In *Dawn Equipment Co. v. Micro-Trak Systems, Inc.*,[213] the Seventh Circuit concluded that the Federal Circuit did not have appellate jurisdiction over an action for breach of contract, even though the contract, and indeed the very term at issue, involved patent rights.[214] Dawn Equipment filed a patent application for its Harvestyield device, an invention designed to measure the flow of grain through a combine.[215] While the application was pending, Dawn Equipment contracted with Micro-Trak to sell the rights to the Harvestyield device in exchange for a lump sum payment and royalties.[216] In addition, the payment amounts would increase if the Harvestyield device were deemed a "suitable patent." Although a patent issued, Micro-Trak contended that the patent was not suitable on the grounds that it did not preclude competitors from making similar products.[217] As a result, Micro-Trak refused to pay the higher royalty rate, and Dawn Equipment brought suit.

The Seventh Circuit began its analysis by reviewing the breadth of Federal Circuit appellate jurisdiction over patent matters.[218] The Federal Circuit has exclusive jurisdiction over cases "arising under" patent law. To arise under patent law, the case must contain a cause of action created from a federal patent law, or patent law must be a necessary element of one of the plaintiff's claims found in the pleadings.[219] Also, "[t]he 'arising under' analysis parallels the well-pleaded complaint rule for federal jurisdiction. If a plaintiff must succeed on a question of patent law in order to prevail, then jurisdiction is founded on § 1338, and if not, not."[220]

The Seventh Circuit went on to conclude that interpretation of the contract term was a matter of state contract law rather than federal patent law.[221] The dispute centered on whether the issued patent was a "suitable patent," as that term was used in the contract. If it was, then Micro-Trak was in breach of the contract. Because the term "suitable" had nothing to do with interpretation or construction of the patent or the scope ***97** of its claims, but rather, involved the understanding of the parties to that contract, state contract law governed resolution of the dispute. Therefore, the district court's jurisdiction was based on diversity, and the Seventh Circuit properly maintained appellate jurisdiction.[222]

Conversely, in *United States Valves, Inc. v. Dray*,[223] the Seventh Circuit held that a breach of contract action regarding certain patent rights did, in fact, arise under the patent law, thus granting appellate jurisdiction to the Federal Circuit rather than the Seventh Circuit.[224] The plaintiff sued the defendant, the patent owner, for breach of an exclusive licensing agreement.[225] According to the complaint, the defendant began producing and selling valves covered by the patent in violation of the licensing agreement. Holding that the defendant had violated the licensing agreement, the court awarded damages as well as a permanent injunction.[226]

While on appeal before the Seventh Circuit, the defendant sought to transfer the case to the Federal Circuit because the plaintiff's claim for breach of contract necessarily involved patent issues.[227] Initially, the Seventh Circuit noted that federal jurisdiction hinged upon whether the district court's jurisdiction over the action was premised on diversity of citizenship or patent law jurisdiction.[228] The Seventh Circuit concluded that because the relief sought necessarily involved the resolution of a patent law question, the district court's jurisdiction was based on patent law.[229] To establish that the defendant was violating the licensing agreement, the plaintiff had to show that the defendant was manufacturing products covered by the patent at issue; in essence, infringing upon the defendant's own patent. The scope of the claims at issue and whether the claims covered the defendant's actions were patent issues, and thus jurisdiction over the appeal belonged to the Federal Circuit.[230]

D. Standard of Review

Dickinson v. Zurko[231] involved a dispute between the Federal Circuit and the Commissioner of Patents, the head of the U.S. Patent and Trademark Office ("PTO"), ***98** regarding the standard of review to be used by the Federal Circuit when reviewing the factual findings underlying patentability determinations of the PTO.[232]

The Administrative Procedure Act ("APA") provides the standard of review with respect to findings of fact made by federal administrative agencies.[233] The APA states that "a reviewing court shall…(2) hold unlawful and set aside agency…findings…found to be (A) arbitrary, capricious [or] an abuse of discretion, or…(E) unsupported by substantial evidence...."[234] Alternatively, Rule 52(a) of the Federal Rules of Civil Procedure provides the standards regarding appellate review of findings of fact made by district court judges.[235] Rule 52(a) mandates that the reviewing court shall set aside findings of fact only if they are "clearly erroneous." This clearly erroneous standard of review has traditionally been regarded as more strict (less deferential), thus allowing closer judicial review than the APA section 706 agency review standard.[236]

In *Dickinson*, Zurko filed an application, serial no. 07/479,666, pertaining to a method for improving security in a computer system.[237] The PTO examiner denied the proffered claims because they were obvious in light of prior art, and the Board of Patent Appeals and Interferences upheld the examiner's decision.[238] A Federal Circuit panel initially treated the question as one of fact and held that the PTO's fact finding was clearly erroneous.[239] The Federal Circuit agreed to rehear the matter *en banc* to resolve the standard of review issue, and the *en banc* court held that the panel had correctly applied the clearly erroneous standard.[240] The U.S. Solicitor General sought certiorari on behalf of the Commissioner of Patents, arguing that the Federal Circuit panel should have applied the less stringent APA standard when on appeal from PTO determinations.[241]

Because the consideration of the PTO as an "agency" under the APA was not in dispute, the APA standard of review applied unless an exception to the APA was applicable.[242] The Federal Circuit considered APA section 559 to provide such an ***99** exception.[243] Section 559 provides that the APA does not "limit or repeal any additional requirements…recognized by law."[244] According to the Federal Circuit, established procedures at the time of passage of the APA mandated the continued use of the stricter standard of review. The Federal Circuit's position was threefold:
(1) at the time of the APA's adoption, in 1946, the Court of Customs and Patent Appeals (CCPA), a Federal Circuit predecessor, applied a court/court "clearly erroneous" standard;

(2) that standard was stricter than ordinary court/agency review standards; and

(3) that special tradition of strict review consequently amounted to an "additional requirement" that under §559 trumps the requirements imposed by § 706.[245]

The Supreme Court, in an opinion by Justice Breyer, disagreed, finding that the section 559 exception did not apply.[246] Reviewing the eighty-nine cases allegedly embodying the pre-APA standard of review, the Court held that those cases did

not reflect a well-established, stricter standard of review for PTO fact finding.[247] In twenty-three of those cases, the CCPA used words akin to "clearly erroneous" to describe the standard of review applied by the CCPA, such as "clear case of error" and "clearly wrong."[248] The remaining cases used words such as "manifest error," which could be similarly construed. However, at the time the APA was passed, the relevant conventional phrases were not the same as they are today and not nearly as firmly established.[249] The Supreme Court noted that the courts sometimes used terms such as clearly erroneous to describe a less strict standard of review.[250] Moreover, courts at the time also used terms such as "substantial evidence" to describe the stricter court/court standard of review.[251]

Accordingly, the Supreme Court concluded that the Federal Circuit had failed to establish prevalent use of the court/court standard of review in 1946. Because this stricter standard was not an "additional requirement…recognized by law," the exception provided by APA section 559 did not apply, and the Federal Circuit was obligated to use the court/agency standard of review of APA section 706.[252]

***100 VII. Conclusion**

From the discussed opinions several predictions can be made. First, district courts likely will follow the *Pitney Bowes* guidelines concerning the proper role of extrinsic evidence, particularly expert testimony, in the context of claim construction issues. Second, prosecution history estoppel issues will receive much more attention in many current lawsuits, as accused infringers seek to capitalize on the uncertainty in the law pending an *en banc* decision by the Federal Circuit in *Festo*. That decision, once rendered, undoubtedly will affect not only pending lawsuits and appeals, but also the manner in which applications are prosecuted before the PTO. Third, while the "rules" regarding the appropriate analysis under section 112, paragraph 6 appear to be settled, application in particular situations remains a shadowy proposition. Fourth, although the on-sale bar may seem to be more "readily" available as a defense for accused infringers, establishing the necessary proofs by clear and convincing evidence together with necessary corroboration still presents a serious challenge. Finally, the "availability" of lost profits to patentees may be somewhat diminished.

Footnotes

a1 Jones Day Reavis & Pogue, Dallas, Texas. The author would like to gratefully acknowledge the contribution made to this paper by Daniel T. Conrad, another associate at Jones Day, Dallas. The views expressed in this paper are those of the author, and are not to be attributed to Jones Day, any of its partners, associates or clients, past or present.

1 182 F.3d 1298, 51 U.S.P.Q.2d (BNA) 1161 (Fed. Cir. 1999).

2 *See id.* at 1300, 51 U.S.P.Q.2d at 1162.

3 *Id.*

4 *Id.*

5 *See id.*

6 *See id.* at 1301, 51 U.S.P.Q.2d at 1162.

7 *See id.* at 1302, 51 U.S.P.Q.2d at 1163.

8 *See id.* at 1303, 51 U.S.P.Q.2d at 1163-64.

[9] *See id.*, 51 U.S.P.Q.2d at 1164.

[10] *See id.* at 1303-04, 51 U.S.P.Q.2d at 1164.

[11] *See id.* at 1304, 51 U.S.P.Q.2d at 1164.

[12] *See id.* at 1304-05, 51 U.S.P.Q.2d at 1165.

[13] *Id.* at 1306, 51 U.S.P.Q.2d at 1166.

[14] *See id.* The panel expanded upon this part of its analysis dealing with claim preambles with the following guidance:
The preamble statement that the patent claims a method of or apparatus for "producing an image of generated shapes made up of spots" is not merely a statement describing the invention's intended field of use. Instead, that statement is intimately meshed with the ensuing language in the claim. For example, both independent claims conclude that the clause "whereby the appearance of smoothed edges are given to the generated shapes." Because this is the first appearance in the claim body of the term "generated shapes," the term can only be understood in the context of the preamble statement "producing on an image of generated shapes made up of spots." Similarly, the term "spots" is initially used in the preamble to refer to the elements that make up the image of generated shapes that are produced on the photoreceptor.
Id. at 1305-06, 51 U.S.P.Q.2d at 1165-66 (citations omitted).

[15] *Id.* at 1312-13, 51 U.S.P.Q.2d at 1171 (citations omitted).

[16] *See id.* at 1307-08, 51 U.S.P.Q.2d at 1167.

[17] *See id.* at 1309, 51 U.S.P.Q.2d at 1169.

[18] *See id.*

[19] *See id.* at 1309, 51 U.S.P.Q.2d at 1169.

[20] *Id.*

[21] *See id.*

[22] *See id.*

[23] 90 F.3d 1576, 39 U.S.P.Q.2d (BNA) 1593 (Fed. Cir. 1996).

[24] 517 U.S. 370, 38 U.S.P.Q.2d (BNA) 1461 (1996).

[25] *See* Bell & Howell Document Prods. Co. v. Altek Sys., 132 F.3d 701, 706, 45 U.S.P.Q.2d (BNA) 1033, 1038 (Fed. Cir. 1997).

[26] *Pitney Bowes*, 182 F.3d at 1308, 51 U.S.P.Q.2d at 1167-68 (citations and footnotes omitted) (emphasis added).

[27] *See id.* at 1309, 51 U.S.P.Q.2d at 1168.

[28] *See id.* at 1309, 51 U.S.P.Q.2d at 1168.

[29] *Id.* at 1314, 51 U.S.P.Q.2d at 1173.

[30] *See id.*

[31] *See id.* at 1315, 51 U.S.P.Q.2d at 1173 (Rader, J., additional views).

[32] *See id.* at 1315, 51 U.S.P.Q.2d at 1173.

[33] 172 F.3d 1361, 50 U.S.P.Q.2d (BNA) 1385 (Fed. Cir. 1999), *vacated*, 187 F.3d 1381, 51 U.S.P.Q.2d (BNA) 1959 (Fed. Cir. 1999).

[34] 520 U.S. 17, 41 U.S.P.Q.2d (BNA) 1865 (1997).

[35] *See Festo*, 172 F.3d at 1374, 1381, 50 U.S.P.Q.2d at 1393, 1398.

[36] *See* Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 187 F.3d 1381, 51 U.S.P.Q.2d (BNA) 1959 (Fed. Cir. 1999).

[37] *Festo*, 172 F.3d at 1372, 50 U.S.P.Q.2d at 1392 (citations omitted).

[38] *See id.* at 1373, 50 U.S.P.Q.2d at 1393.

[39] *Id.* at 1374, 50 U.S.P.Q.2d at 1393.

[40] *See id.*

[41] *See id.*

[42] *See id.* at 1376-78, 50 U.S.P.Q.2d at 1395-97.

[43] *See id.* at 1380, 50 U.S.P.Q.2d at 1398.

[44] *See id.* at 1378, 50 U.S.P.Q.2d at 1397.

[45] *See id.* at 1378-79, 50 U.S.P.Q.2d at 1397.

[46] *Id.* at 1379, 50 U.S.P.Q.2d at 1397.

[47] *Id.* at 1380, 50 U.S.P.Q.2d at 1398.

[48] 187 F.3d 1381, 51 U.S.P.Q.2d (BNA) 1959 (Fed. Cir. 1999).

[49] *See id.* at 1381, 51 U.S.P.Q.2d at 1959.

[50] *Id.*

[51] 181 F.3d 1291, 50 U.S.P.Q.2d (BNA) 1900 (Fed. Cir. 1999).

[52] *See id.* at 1298-1301, 50 U.S.P.Q.2d at 1905-07.

[53] *See id.* at 1298, 50 U.S.P.Q.2d at 1905 (citing Cybor Corp. v. FAS Tech., Inc., 138 F.3d 1448, 1460 (Fed. Cir. 1998)).

[54] *See id.* at 1298, 50 U.S.P.Q.2d at 1905.

[55] *See id.* at 1299, 50 U.S.P.Q.2d at 1905.

[56] *See id.* at 1300, 50 U.S.P.Q.2d at 1906.

[57] *See id.* at 1301, 50 U.S.P.Q.2d at 1907.

[58] 181 F.3d 1313, 50 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 1999), *petition for cert. filed*, 68 U.S.L.W. 3274 (U.S. Oct. 14, 1999) (No. 99-653).

[59] Interestingly, Judge Rader had been the trial court judge sitting in designation in the Eastern District of New York.

[60] It was undisputed that the accused process performed all the steps of the asserted claim; however, it performed certain of those steps in a different order. The trial court (Judge Rader) construed the claim to require the steps to be performed in the recited sequence. *See id.* at 1320, 50 U.S.P.Q.2d at 1869.

[61] *See id.*

[62] *See id.* at 1320, 50 U.S.P.Q.2d at 1869.

[63] *See id.* at 1322-23, 50 U.S.P.Q.2d at 1871.

[64] *See id.* at 1327, 50 U.S.P.Q.2d at 1874.

[65] *See id.* at 1326, 50 U.S.P.Q.2d at 1873.

[66] *See id.* at 1326. The Federal Circuit similarly rejected a patentee's attempt to avoid prosecution history estoppel in Merck & Co., Inc. v. Mylan Pharmaceuticals, Inc., 190 F.3d 1335, 51 U.S.P.Q.2d (BNA) 1954 (Fed. Cir. 1999). There, the patentee argued that it had amended the claims at issue in response to the examiner's recommendation that it elect a species from the proposed Markush genus, rather than as a result of the examiner's obviousness rejection. The Federal Circuit concluded that the most reasonable reading of the prosecution history was that the patentee's claim amendments were primarily the result of the patentability rejection under section 103. *See id.* at 1341, 51 U.S.P.Q.2d at 1958. Subsequently, in Elkay Manufacturing Co. v. Ebca Manufacturing Co., Nos. 99-1276 and 98-1596, 1999 WL 715101 (Fed. Cir. Sept. 15, 1999), the Federal Circuit held a patentee bound by arguments made to the PTO Examiner during prosecution. In order to overcome the Examiner's obviousness rejection, the patentee had disavowed a potential interpretation of certain claims, although there had been no substantive amendments to the claims at issue. *See id.* at *5. The Court held the patentee to be estopped from later arguing for a broader interpretation of the claims, and thus affirmed the trial court's holding of non-infringement. *See id.* at *8.

[67] 174 F.3d 1294, 50 U.S.P.Q.2d 1429 (Fed. Cir. 1999), *petition for cert. filed*, 68 U.S.L.W. 3252 (Oct. 1, 1999) (No. 99-573).

[68] *See id.* at 1297, 50 U.S.P.Q.2d at 1430-31.

[69] *Id.* at 1297, 50 U.S.P.Q.2d at 1430.

[70] *See id.* at 1299-1300, 50 U.S.P.Q.2d at 1432.

[71] *See id.* at 1300-01, 50 U.S.P.Q.2d at 1433.

[72] *See id.* at 1301, 50 U.S.P.Q.2d at 1433.

[73] *See id.* at 1303-04, 50 U.S.P.Q.2d at 1435-36.

[74] *Id.* at 1303, 50 U.S.P.Q.2d at 1435.

[75] *See id.* at 1304-06, 50 U.S.P.Q.2d at 1436-37.

[76] The panel also generally discussed means-plus-function claim elements, stating:
The word "means" is "part of the classic template for functional claim elements." Accordingly, in determining whether a claim element falls within section 112, paragraph 6, this court has presumed an applicant advisedly used the word "means" to invoke the statutory mandates for means-plus-function clauses. Two specific rules, however, overcome this presumption. First, a claim element that uses the word "means" but recites no function corresponding to the means does not invoke section 112, paragraph 6. Second, even if the claim element specifies a function, if it also recites sufficient structure or material for performing that function, section 112, paragraph 6 does not apply.
Id. at 1302, 50 U.S.P.Q.2d at 1434 (citations omitted).

[77] *Id.* at 1302-03, 50 U.S.P.Q.2d at 1434-35.

[78] *Id.* at 1304, 50 U.S.P.Q.2d at 1435.

[79] *Id.* at 1304, 50 U.S.P.Q.2d at 1436. For a discussion about the differences between "means-plus-function" and "step-plus-function"

claim elements and the appropriate framework for construing the latter, see Seal-Flex, Inc. v. Athletic Track & Court Construction, 172 F.3d 836, 847-51, 50 U.S.P.Q.2d (BNA) 1225, 1232-35 (Fed. Cir. 1999) (Rader, J., concurring).

[80] 185 F.3d 1259, 51 U.S.P.Q.2d (BNA) 1225 (Fed. Cir. 1999).

[81] *See id.* at 1267, 51 U.S.P.Q.2d at 1233.

[82] 145 F.3d 1303, 46 U.S.P.Q.2d (BNA) 1752 (Fed. Cir. 1998).

[83] *See Odetics*, 185 F.3d at 1266, 51 U.S.P.Q.2d at 1276.

[84] *Id.* at 1266, 51 U.S.P.Q.2d at 1226.

[85] *See id.*, 51 U.S.P.Q.2d at 1227.

[86] *See id.*, 51 U.S.P.Q.2d at 1228.

[87] *See id.* at 1266-67, 51 U.S.P.Q.2d at 1228.

[88] *See id.* at 1267, 51 U.S.P.Q.2d at 1228.

[89] *Id.*

[90] *See id.*

[91] *See id.*

[92] *See id.*

[93] *See id.*

[94] *See id.* at (citing Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1308, 46 U.S.P.Q.2d (BNA) 1752, 1757).

[95] *See id.* at 1268, 51 U.S.P.Q.2d at 1229.

[96] *Id.* at 1268, 51 U.S.P.Q.2d at 1229.

[97] *See id.*

[98] *Id.* at 1268, 51 U.S.P.Q.2d at 1229-30 (citations omitted).

[99] *Id.* at 1277, 51 U.S.P.Q.2d at 1237.

[100] *See id.*

[101] *See id.*

[102] 172 F.3d 1352, 50 U.S.P.Q.2d (BNA) 1447 (Fed. Cir. 1999), *cert. denied*, 120 S. Ct. 368 (1999).

[103] *See id.* at 1353, 50 U.S.P.Q.2d at 1448.

[104] *See id.* 50 U.S.P.Q.2d at 1449.

[105] *See id.* at 1356, 50 U.S.P.Q.2d at 1450.

[106] *See id.*

[107] *See id.* at 1357, 50 U.S.P.Q.2d at 1451. The panel cited *In re* Alappat, 33 F.3d 1526 (Fed. Cir. 1994) and State Street Bank & Trust Co. v. Signature Financial Group, Inc., 149 F.3d 1368 (Fed. Cir. 1998) for the proposition that a mathematical algorithm may be an integral part of a patent so long as the patentable subject matter as a whole is useful. That these cases involved patents claiming machines, whereas the '184 patent involved a method or process, was not deemed to be significant to the section 101 analysis: "[w]hether stated implicitly or explicitly, we consider the scope of § 101 to be the same regardless of the form—machine or process—in which a particular claim is drafted." *Id.*

[108] *See id.* at 1358, 50 U.S.P.Q.2d at 1451.

[109] *Id.*, 50 U.S.P.Q.2d at 1451.

[110] 185 F.3d 1364, 51 U.S.P.Q.2d (BNA) 1700 (Fed. Cir. 1999).

[111] *See id.* at 1365, 51 U.S.P.Q.2d at 1701. A "post-mix" beverage dispenser stores the beverage syrup concentrate in a separate location from the water until the beverage is ready to be dispensed, whereas a "pre-mix" beverage dispenser the syrup and water are already mixed together and stored in a reservoir until ready to be dispensed. As a result, with a "pre-mix" dispenser the beverage may be displayed to the consumer to stimulate impulse buying. *Id.*

[112] *See id.*

[113] *See id.* at 1366, 51 U.S.P.Q.2d at 1702.

[114] 103 F. 868 (2d Cir. 1900).

[115] 7 F.2d 1003 (2d Cir. 1925).

[116] *See Rickard*, 103 F. at 869 (invalidating patent on a process solely for treating tobacco to make it appear spotted, when cigars with spotted wrappers were considered to be of superior quality); *Aristo Hosiery Co.*, 7 F.2d at 1004 (invalidating patent claiming a seamless stocking with a structure that imitated a seamed stocking).

[117] *Juicy Whip*, 185 F.3d at 1367, 51 U.S.P.Q.2d at 1703.

[118] *Id.*

[119] *See id.*

[120] 182 F.3d 1315, 51 U.S.P.Q.2d (BNA) 1307 (Fed. Cir. 1999).

[121] *See id.* at 1316, 51 U.S.P.Q.2d at 1308.

[122] *See id.* at 1317, 51 U.S.P.Q.2d at 1308.

[123] *See id.*

[124] *See id.* at 1318-19, 51 U.S.P.Q.2d at 1309-10.

[125] Recall that in *In re* Robertson, 169 F.3d 743, 49 U.S.P.Q.2d (BNA) 1949 (Fed. Cir. 1999), a different Federal Circuit panel held, in reversing a Patent and Trademark Office Board of Patent Appeals and Interferences decision, that in order for a prior art patent to anticipate under inherency principles the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Id.* at 745, 49 U.S.P.Q.2d at 1950-51.

[126] *Abbott Lab.*, 182 F.3d at 1319, 51 U.S.P.Q.2d at 1309-10.

[127] *See id.* at 1317, 51 U.S.P.Q.2d at 1308.

[128] 180 F.3d 1354, 51 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1999).

[129] *See id.* at 1367, 51 U.S.P.Q.2d at 1011.

[130] *See id.* at 1360-61, 51 U.S.P.Q.2d at 1005-06.

[131] *See id.* at 1361, 51 U.S.P.Q.2d at 1006.

[132] *Id.* at 1366, 51 U.S.P.Q.2d at 1009.

[133] *See id.*

[134] *See id.*, 51 U.S.P.Q.2d at 1010.

[135] *See id.* at 1367, 51 U.S.P.Q.2d at 1010.

[136] *Id.* (citing Price v. Symsek, 988 F.2d 1187, 1194, 26 U.S.P.Q.2d 1031, 1036 (Fed. Cir. 1993)).

[137] *Id.*

[138] *See id.*, 51 U.S.P.Q.2d at 1011.

[139] 166 F.3d 1172, 49 U.S.P.Q.2d (BNA) 1530 (Fed. Cir. 1999), *cert. denied*, 119 S. Ct. 2395 (1999).

[140] 148 F.3d 1368, 47 U.S.P.Q.2d (BNA) 1363 (Fed. Cir. 1998).

[141] *Finnigan*, 180 F.3d at 1369, 51 U.S.P.Q.2d at 1012.

[142] *See id.*

[143] *See id.*

[144] *See id.* at 1370, 51 U.S.P.Q.2d at 1012.

[145] 182 F.3d 893, 51 U.S.P.Q.2d (BNA) 1697 (Fed. Cir. 1999).

[146] *See id.* at 897, 51 U.S.P.Q.2d at 1700.

[147] *See id.* at 894, 51 U.S.P.Q.2d at 1699.

[148] *See id.* at 896, 51 U.S.P.Q.2d at 1699-1700.

[149] *See id.*, 51 U.S.P.Q.2d at 1700. (citing *In re* Reuter, 670 F.2d 1015, 1021 n.9, 210 U.S.P.Q. 249, 255 n.9 (C.C.P.A. 1981)

[150] *See id.*.

[151] *See id.*

[152] *See id.*

[153] 185 F.3d 1341, 51 U.S.P.Q.2d (BNA) 1556 (Fed. Cir. 1999).

154 *Id.* at 1343, 51 U.S.P.Q.2d at 1557.

155 *See id.*

156 *See id.* at 1345, 51 U.S.P.Q.2d at 1558.

157 Notably, the plaintiff, Grain Processing, sold a line of maltodextrins during the entire patent period as well, but its products did not fall within the asserted claim language because they were made from a non-waxy starch, whereas the claim required a "waxy" starch.

158 *See id.* at 1345, 51 U.S.P.Q.2d at 1558-59.

159 *See id.*

160 *Id.*

161 *See id.*

162 *See id.*

163 *See id.*

164 *See id.*

165 *See id.*

166 *See id.*

167 *See id.* at 1346, 51 U.S.P.Q.2d at 1559.

168 *See id.*

169 *See id.* at 1346, 51 U.S.P.Q.2d at 1559-60.

170 *See id.*, 51 U.S.P.Q.2d at 1560.

171 *See id.*

172 *See id.*

173 *See id.* at 1347, 51 U.S.P.Q.2d at 1560.

[174] *See id.* at 1349, 51 U.S.P.Q.2d at 1562.

[175] *See id.*

[176] *See id.*

[177] *See id.* at 1343, 51 U.S.P.Q.2d at 1557.

[178] *Id.* at 1348, 51 U.S.P.Q.2d at 1561 (citations omitted).

[179] *See id.*

[180] *Id.* at 1349, 51 U.S.P.Q.2d at 1562 (citations omitted).

[181] *See id.* at 1353, 51 U.S.P.Q.2d at 1565.

[182] *See id.*

[183] *See id.* at 1354, 51 U.S.P.Q.2d at 1565.

[184] *See id.*

[185] *Id.*

[186] *See id.*, 51 U.S.P.Q.2d at 1555-56 (*comparing* Rite-Hite Corp. v. Kelly Co., 56 F.3d 1538 (Fed. Cir. 1995) *with* King Instruments Corp. v. Perego, 72 F.3d 855 (Fed. Cir. 1995)).

[187] 119 S. Ct. 2199, 2202, 51 U.S.P.Q.2d (BNA) 1081, 1083 (1999).

[188] Patent and Plant Variety Protection Remedy Clarification Act, Pub. L. No. 102-560, 106 Stat. 4230 (1992) (codified as amended in 35 U.S.C. §§ 271(h), 296(a) (1994)).

[189] *See id.* at 2203, 51 U.S.P.Q.2d at 1083.

[190] 517 U.S. 44, 47 (1996) (holding that Congress did not have authority to abrogate states' immunity under Article I of the Constitution).

[191] *See Florida Prepaid*, 119 S. Ct. at 2203-04, 51 U.S.P.Q.2d at 1084.

[192] *See id.* at 2204, 51 U.S.P.Q.2d at 1084.

193 *See id.*

194 *See id.* at 2201, 51 U.S.P.Q.2d at 1082.

195 *See id.* at 2205, 51 U.S.P.Q.2d at 1085 (citing *Seminole Tribe*, 517 U.S. at 55).

196 *See id.*

197 *See Seminole Tribe*, 517 U.S. at 59.

198 *See Florida Prepaid*, 119 S. Ct. at 2201, 51 U.S.P.Q.2d at 1802.

199 *See id.*

200 *See id.* at 2202, 51 U.S.P.Q.2d at 1082.

201 *See id.* at 2210-11, 51 U.S.P.Q.2d at 1089-90. Following the Supreme Court's ruling in *Florida Prepaid*, the Federal Circuit has ordered additional briefing in a declaratory judgment action against the University of California in *Genentech Inc. v. Regents of the University of California*, No. 97-1099, 1999 WL 798031 (Fed. Cir. Aug. 26 1999). Also, the United States District Court for the Eastern District of California held that *Florida Prepaid* did not bar a suit against a state agency declaring a patent invalid. New Star Lasers, Inc. v. Regents of the Univ. of Cal., 63 F. Supp. 2d 1240, 52 U.S.P.Q.2d (BNA) 1215 (E.D. Cal. 1999) (noting that not all patents are valid, stressed importance of declaratory relief with respect to patents, and interpreted Patent Remedy Act to constitute a waiver of states' Eleventh Amendment immunity from declaratory relief with respect to patent rights).

202 170 F.3d 1373, 50 U.S.P.Q.2d (BNA) 1033 (Fed. Cir. 1999).

203 *See id.* at 1382, 50 U.S.P.Q.2d at 1041. The panel also affirmed on the alternative ground of non-infringement due to prosecution history estoppel. *Id.*

204 402 U.S. 313, 332-34, 169 U.S.P.Q. (BNA) 513, 521 (1971).

205 *Pharmacia*, 170 F.3d at 1380, 50 U.S.P.Q.2d at 1039.

206 *See id.* at 1381-82, 50 U.S.P.Q.2d at 1040-41 (cautioning that while it may be wiser for a district court to postpone or stay its proceedings pending a JMOL/new trial motion in another court, it is by no means obligated to do so).

207 183 F.3d 1334, 51 U.S.P.Q.2d (BNA) 1295 (Fed. Cir. 1999).

208 *See id.* at 1337, 51 U.S.P.Q.2d at 1297.

209 *See id.*

[210] *See id.* (citing FED. CIR. R. 47.6(b)).

[211] *See id.*

[212] *Id.* at 1338, 51 U.S.P.Q.2d at 1298.

[213] 186 F.3d 981, 51 U.S.P.Q.2d (BNA) 1666 (7th Cir. 1999).

[214] *See id.* at 986, 51 U.S.P.Q.2d at 1669.

[215] *See id.* at 984, 51 U.S.P.Q.2d at 1667.

[216] *See id.*

[217] *See id.*

[218] *See id.* at 986, 51 U.S.P.Q.2d at 1669.

[219] *See id.*

[220] *Id.* (citations omitted).

[221] *See id.*

[222] *See id.*

[223] 190 F.3d 811, 52 U.S.P.Q.2d (BNA) 1055 (7th Cir. 1999).

[224] *See id.* at 815, 52.U.S.P.Q.2d at 1058.

[225] *See id.* at 812, 52 U.S.P.Q.2d at 1056.

[226] *See id.*

[227] *See id.*

[228] *See id.* at 813, 52 U.S.P.Q.2d at 1057.

[229] *See id.* at 815, 52 U.S.P.Q.2d at 1058.

[230] *See id.*

[231] 119 S. Ct. 1816, 50 U.S.P.Q.2d (BNA) 1930 (1999).

[232] *See id.* at 1818, 50 U.S.P.Q.2d at 1931.

[233] *See id.* (citing 5 U.S.C. § 706 (1994)).

[234] *Id.*, 50 U.S.P.Q.2d at 1932 (quoting 5 U.S.C. § 706 (1994)).

[235] *See* FED. R. CIV. P. 52(a).

[236] *Dickinson*, 119 S. Ct. at 1819, 50 U.S.P.Q.2d at 1932. The Supreme Court characterized the stricter standard prescribed by Rule 52(a) governing appellate review of findings of fact made by a district judge as "court/court review." Likewise, the Court characterized the standard of review prescribed by the APA as "court/agency review." *Id.*

[237] *See id.* at 1818, 50 U.S.P.Q.2d at 1932.

[238] *See id.* at 1818-19, 50 U.S.P.Q.2d at 1932.

[239] *See id.* at 1819, 50 U.S.P.Q.2d at 1932 (citing *In re* Zurko, 111 F.3d 887, 889 n.2, 42 U.S.P.Q.2d 1476, 1478 n.2 (Fed. Cir. 1997).

[240] *See id.*

[241] *See id.*

[242] *See id.*

[243] *See id.*

[244] *Id.* (citing 5 U.S.C. § 559 (1994)).

[245] *Id.*

[246] *See id.* at 1819, 50 U.S.P.Q.2d at 1932-33.

[247] *See id.*, 50 U.S.P.Q.2d at 1933.

[248] *See id.*

[249] *See id.* at 1820, 50 U.S.P.Q.2d at 1933.

250 *See id.*

251 The Court additionally noted that the absence of the term "substantial evidence" was not in itself significant, as the standardization of the term did not occur until Congress began using it, or its equivalent, in federal statutes. *See id.*

252 *Id.* at 1822, 50 U.S.P.Q.2d at 1935.