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HILTON DAVIS AND THE DOCTRINE OF EQUIVALENTS: A LITTLE CHANGE, A LITTLE MISCHIEF

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After waiting for nearly five months to see what the Supreme Court would do about the much-criticized "doctrine of equivalents" n1 ("DOE"), we finally got the answer: Not much!

We had hoped the Court would reconsider whether the DOE is fundamentally inconsistent with the requirement of *35 U.S.C. § 112* that an inventor's patent application "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention" . . . but it declined to do so. n2

We had hoped the Court would reconsider whether the DOE is fundamentally inconsistent with *35 U.S.C. §§ 251-252* which govern reissue, the statutory provision for correcting claims that have been drafted too narrowly, . . . but it declined to do so. n3

We had hoped the Court would reconsider whether the "triple identity" test established by the Court nearly 50 years ago in *Graver Tank* n4 generally referred to as the function-way-result test is the appropriate framework for applying the DOE or

[*756] whether the "insubstantial difference" test proposed by the Federal Circuit's majority n5 is an acceptable alternative . . . but it declined to do so. n6

We had hoped (or at least I had hoped) the Court would decide that the DOE applies to the "unscrupulous copyist" who seeks a way of committing "fraud on a patent" n7 but not to the innocent infringer who independently creates an invention . . . but it declined to do so. n8

Some even had hoped the Court would decide whether the application of the DOE is a question of law for the court or a question of fact for the jury n9 . . . but it declined to do so. n10

And there may have been some who had hoped the Court would resolve the long standing dispute among the members of the

Federal Circuit whether the DOE should be applied to the invention as a whole or to each element of the invention . . . and it did! n11

But I certainly did not expect the court to change the "timing" of the determination of equivalency from when the original invention was made to when the alleged infringement occurred . . . but it did! n12

And I doubt there were any who had expected the Court to make a fundamental change in the application of prosecution history estoppel . . . but it did! n13

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I. The Really Big Question: Is the DOE Still Viable?

There are those who had hoped the Court would pronounce the DOE to be DOA Dead on Arrival. The petitioner certainly hoped for that result. n14 Four of the judges of the Federal Circuit hoped for the same thing. n15 And so did I.

Writing for a unanimous Court n16 and relying on the petitioner's brief, Justice Thomas identified four arguments for "pulling the plug" on the DOE:

(1) the doctrine of equivalents is inconsistent with the statutory requirement that a patentee specifically "claim" the invention covered by a patent, *35 U.S.C. § 112*;

(2) the doctrine circumvents the patent reissue process designed to correct mistakes in drafting or the like and avoids the express limitations on that process, *35 U.S.C. §§ 251-252*;

(3) the doctrine is inconsistent with the primacy of the Patent and Trademark Office (PTO) in setting the scope of a patent through the patent prosecution process; and

(4) the doctrine was implicitly rejected as a general matter by Congress' specific and limited inclusion of the doctrine in one section regarding "means" claiming, *35 U.S.C. § 112, 6*. n17

Justice Thomas brushed off the first three arguments merely by pointing out that they "were made in *Graver Tank* in the context of the 1870 Patent Act, and failed to command a majority." n18 He noted that there was a "vigorous dissent" by Justice Black on precisely these grounds in *Graver Tank*, n19 and in addition noted a similar objection to the DOE at the time of its birth, nearly 100 years before *Graver Tank*, n20 in *Winans v.*

[*758] Denmead. n21 Winans was a 5-4 decision with a dissenting opinion as vigorous as Justice Black's dissent in Graver Tank. Justice Thomas interpreted the Winans dissent as arguing that "the majority result [which introduced the doctrine of equivalents] was inconsistent with the requirement in the 1836 Patent Act that the applicant 'particularly "specify and point" out what he claims as his invention.'" n22 But neither the fact that the DOE has been controversial from its birth to the present, n23 nor the confusion surrounding the doctrine, suggested by "significant disagreement within the Court of Appeals for the Federal Circuit concerning the application of Graver Tank," n24 nor even the Court's concern "that the doctrine of equivalents, as it has come to be applied since Graver Tank, has taken on a life of its own, unbounded by the patent claims" n25 gave this Court a sufficient reason to reconsider these three fundamental questions. n26

The only challenge to the continued viability of the DOE considered in any detail by the Court was "[p]etitioner's fourth argument for an implied congressional negation of the doctrine of equivalents." n27 That argument was based on the reference to "equivalents" in 35 U.S.C. § 112, P 6 n28 which may be read to suggest that Congress intended to overrule the much-broader DOE which originated in Winans and was

[*759] reaffirmed in *Graver Tank*. The Court also gave this argument short shrift, disposing of it in two brief paragraphs. n29

Justice Thomas pointed out that "Congress enacted

112, 6 in response to *Halliburton Oil Well Cementing Co. v. Walker*, n30 which rejected claims that 'do not describe the invention but use "conveniently functional language at the exact point of novelty.'" n31 Section 112, 6 was added expressly to allow "so-called 'means' claims, with the proviso that application of the broad literal language of such claims must be limited to only those means that are 'equivalent' to the actual means shown in the patent specification." n32

But, as Justice Thomas noted, this new provision "is silent on the doctrine of equivalents as applied where there is no literal infringement." n33 In view of the fact that § 112, P 6 was enacted to "cure a specific problem," Justice Thomas cautioned that "such limited congressional action should not be overread for negative implications" further stating that "[a]bsent something more compelling than the dubious negative inference offered by the petitioner, the lengthy history of the doctrine of equivalents strongly supports adherence to our refusal in *Graver Tank* to find that the Patent Act conflicts with that doctrine." n34 Perhaps most decisive is Justice Thomas' view that "Congress in 1952 could easily have responded to *Graver Tank* as it did to the *Halliburton* decision. But it did not." n35

II. The Other Big Question: Is the DOE being Applied Properly by the Federal Circuit?

The Court did seem to recognize problems with the way the Federal Circuit had applied the doctrine of equivalents. n36 It seemed disturbed that this "specialized court," which was created specifically to

[*760] bring consistency, predictability and uniformity to the patent law, could not even agree on whether the doctrine was still viable and, if it was, how it should be applied. Here the Court seemed to side with the five Federal Circuit judges n37 below who dissented:

We do, however, share the concern of the dissenters below that the doctrine of equivalents, as it has come to be applied since *Graver Tank*, has taken on a life of its own, unbounded by the patent claims. There can be no denying that the doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice functions of the statutory claiming requirement. n38

Concluding that the doctrine as currently applied was "not free from confusion," the Court "endeavor[ed] to clarify the proper scope of the doctrine." n39

The Federal Circuit itself recognized the confusion and conflict accompanying the DOE and sought the advice of counsel when it granted rehearing en banc. n40 Before oral argument, the Federal Circuit asked the parties to brief several specific questions, including:

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Does a finding of infringement under the doctrine of equivalents require anything in addition to proof of the facts that there are the same or substantially the same (a) function, (b) way, and (c) result, the so-called triple identity test of *Graver Tank* and cases relied on therein? If yes, what?
n41

After oral argument long after it n42 the majority concluded:

[A] finding of infringement under the doctrine of equivalents requires proof of insubstantial differences between the claimed and accused products or processes. Often the function-way-result test will suffice to show the extent of the differences. In such cases, the parties will understandably focus on the evidence of function, way, and result, and the fact-finder will apply the doctrine based on that evidence. Other factors, however, such as evidence of copying or designing around, may also inform the test for infringement under the doctrine of equivalents. n43

If the Supreme Court had wanted to eliminate the basic cause of the confusion associated with the DOE, then it would have needed to deal with the elusive issue of when a substituted element is or is not an equivalent for the element it replaced. And if the test is whether the difference between the substituted element and the element it replaced is a "substantial difference," then the Court would have needed to explain how a pH difference of 1 full point could be considered insubstantial.
n44

But the Court ducked these difficult issues by concluding that all problems associated with the DOE could be harmoniously resolved simply by requiring that "the doctrine of equivalents must be applied to

[*762] individual elements of the claim, not to the invention as a whole" n45 and then leaving it to the "special expertise" of the Federal Circuit to "refine the formulation of the test for equivalence in the orderly course of case-by-case determinations" n46 The Court continued:

A focus on individual elements and a special vigilance against allowing the concept of equivalence to eliminate completely any such elements should reduce considerably the imprecision of whatever language is used. An analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element. With these limiting principles as a backdrop, we see no purpose in going further and micro-managing the Federal Circuit's particular word-choice for analyzing equivalence. n47

But that's what the Federal Circuit has been doing for the past 15 years and look at the mess it's gotten us into!

The only issue receiving more than a superficial analysis from the Court was petitioner's claim that application of the doctrine of equivalents to give the protection of respondent's patent to a process operating at a pH of 5 was barred by "a well-established limit on non-literal infringement, known variously as 'prosecution history estoppel' and 'file wrapper estoppel.'" n48 There seems no doubt that respondent could not rely on the DOE to reach a process operating above a pH of 9 since the phrase "at a pH from approximately 6.0 to 9.0" was added to the claim during patent prosecution in response to an objection by the patent examiner due to a perceived overlap with U.S. Patent No. 4,189,380, to Booth, et al. (the Booth patent), which revealed an ultrafiltration process operating at a pH above 9.0. n49 There is no disagreement that any surrender of subject matter during patent prosecution in order to "avoid the prior art, or otherwise to address a specific concern such as obviousness that arguably would have rendered the claimed subject matter unpatentable" precludes recapturing

[*763] any part of that subject matter, even if it is equivalent to the matter expressly claimed. n50

The problem in this case is that "[w]hile it is undisputed that the upper limit of 9.0 was added in order to distinguish the Booth patent, the reason for adding the lower limit of 6.0 is unclear." n51 Petitioner argued that prosecution history estoppel should apply to "any surrender of subject matter during patent prosecution regardless of the reason for such surrender." n52 The Court rejected this argument, pointing out that its "prior cases have consistently applied prosecution history estoppel only where claims have been amended for a limited set of reasons," n53 and it was not persuaded that it should change the law "to a more rigid rule invoking an estoppel regardless of the reasons for a change." n54 But then in what must have been a surprise to some, the Court placed the burden on the patentee to explain why the amendment was made rather than requiring the alleged infringer to do so: n55

In our view, holding that certain reasons for a claim amendment may avoid the application of prosecution history estoppel is not tantamount to holding that the absence of a reason for an amendment may similarly avoid such an estoppel. Mindful that claims do indeed serve both a definitional and a notice function, we think the better rule is to place the burden on the patent-holder to establish the reason for an amendment required during patent prosecution. The court then would decide whether that reason is sufficient to overcome prosecution history estoppel as a bar to application of the doctrine of equivalents to the element added by that amendment. n56

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The Court then established a reverse presumption: "Where no explanation is established, however, the court should presume that the PTO had a substantial reason related to patentability for including the limiting element added by amendment. In those circumstances, prosecution history estoppel would bar the application of the doctrine [of] equivalents as to that element." n57 Since the respondent had not established the reason it added a lower pH limit, the matter was remanded to the Federal Circuit to determine whether reasons for that portion of the amendment were offered during patent prosecution, and if not, whether it would be appropriate to give the respondent the further opportunity to do so. n58

This requirement, while not per se unreasonable, will prove troublesome and will increase litigation since in many cases the prosecution history will not reveal why certain changes were made to the language of some claims. "Resourceful counsel" for patentees will be tempted to suggest reasons which will not undermine the assertion of infringement under the DOE. Counsel for the putative infringers will have no factual basis to refute such assertions, regardless of how "creative" they are. This will thus become a "factual issue" to be decided by the Federal Circuit on an inadequate appellate record.

III. The "Fairness" Question: Does the DOE Apply to "Innocent Infringers" Who Independently "Invent" the Infringing Device or Product?

The Court in *Graver Tank* seemed preoccupied with the problem of an "unscrupulous copyist" a pirate who committed a "fraud on a patent." n59 Consistent with this concern, the Court in *Graver Tank* appeared to suggest that independent experimentation by the alleged infringer might support an equitable defense to the doctrine of equivalents. n60 It would seem only reasonable that a truly innocent inventor who was not even aware of the plaintiff's patent and therefore was not a "copyist" ("unscrupulous" or otherwise) should not be held liable for infringing a patent under doctrine of equivalents.

[*765] Indeed, Congress has expressed concern for those who infringe a reissued patent with broader claims by providing for intervening rights. n61

While the court recognized that Graver Tank refers to the prevention of copying and piracy when it described the benefits of the doctrine of equivalents, the Court was not convinced that the doctrine should be so limited. Justice Thomas noted that in *Winans*, the Court viewed the doctrine of equivalents "as growing out of a legally implied term in each patent claim that 'the claim extends to the thing patented, however its form or proportions may be varied.'" n62 The Court reasoned that "[i]f the essential predicate of the doctrine of equivalents is the notion of identity between a patented invention and its equivalent, there is no basis for treating an infringing equivalent any differently than a device that infringes the express terms of the patent." n63 Since an innocent infringer can be found liable for literal infringement, the court saw no reason why an innocent infringer should not be found liable for infringement under the doctrine of equivalents. n64

There is some logic to this argument. An innocent infringer who is completely unaware of the dominant patent cannot rely on his or her lack of knowledge to avoid being held liable for infringing the patent claims. Similarly, an innocent infringer who is aware of the dominant patent but who has been advised by independent patent counsel that his or her process or product does not literally infringe the patent claims cannot rely on "honest belief" to avoid being held liable for infringing the patent claims.

But infringement under the doctrine of equivalents is fundamentally different from literal infringement. If "an innocent" infringes literally, it will be due to his/her innocent mistake either in failing to do a patent search or in erroneously believing that his/her product or process did not infringe literally. n65 In neither case will the patentee be in any way responsible for the innocent infringement. However, if "an innocent" infringes under the doctrine of equivalents, it will be due to the innocent mistake of the patentee in not properly "claiming" his/her invention when the application was originally filed.

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The Hilton Davis case may provide the best example of the difference. Had the inventor indicated a low-end pH limit of 2.2 in its claim, even the petitioner's "independent development" of its process and its complete unawareness of the respondent's patent would not have shielded him from liability. Although "innocent," the petitioner could not point to anything the inventor did to cause the infringement. However, the inventor claimed a low-end pH limit of 6.0. This caused the petitioner to believe that its process operating at a pH of 5.0 was outside the respondent's claim. Even if also "innocent," the respondent could have and should have included a lower pH limit of 5.0 or below. Its failure to do so should have barred a claim for DOE infringement against a truly innocent infringer. n66 But the Court refused to apply principles of equity or fundamental fairness and concluded that they play "no role in the application of the doctrine of equivalents." n67

It this were not enough, the Court took away the one absolute defense Graver Tank gave to the innocent infringer, the requirement that the doctrine should be limited to equivalents that were known at the time the patent issued, and should not extend to after-arising equivalents. The Court held that "the proper time for evaluating equivalency and thus knowledge of interchangeability between elements is at the time of infringement, not at the time the patent issued." n68 More than anything else in Justice Thomas' opinion, this statement reflects a fundamental misunderstanding of basic patent law principles.

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The doctrine of equivalents is, in a sense, a "mirror image" of the doctrine of obviousness. The DOE teaches that a person cannot avoid infringement by substituting an element for one recited in a claim if the substitution would have been obvious to one skilled in the art. The doctrine of obviousness teaches that a person cannot obtain a new patent by substituting an element for one recited in a claim of a prior patent if the substitution would have been obvious to one skilled in the art. The determination of obviousness had been, since *Graver Tank*, based on the knowledge of a person skilled in the art at the time the first invention was made, not when the second "invention" was made. And that was the law under *Graver Tank*.

But with a stroke of his pen, Justice Thomas has changed this fundamental calculus so that the original inventor gets the benefit of an enlargement of the claim which neither he nor anyone else skilled in the art would have contemplated when the invention was made. Again, the facts of this case prove the point. There was evidence that when the respondent's invention was made, neither he nor one skilled in the art would have expected the process to work below a pH of 6. n69 Subsequent development by the petitioner demonstrated that the process could be made to work at a pH below 5. This was a new, non-obvious invention. n70 But the Court held it to be within the scope of the earlier invention. This turns both the doctrine of equivalents and the doctrine of obviousness on their heads!

IV. The Constitutional Question: Is the DOE an Issue of Law or an Issue of Fact?

There were great hopes that the Court would decide whether application of the doctrine of equivalents is a task for the judge or for the jury under the Seventh Amendment to the Constitution. But the Court concluded that the issue was not "squarely presented" to it by the petitioner who only made "passing reference" to it, and the Court chose to put off resolving the issue. n71 Justice Thomas did suggest that there was "ample support" in the Court's prior cases for the Federal Circuit's

[*768] conclusion that it was for the jury to decide whether the accused process was equivalent to the claimed process. n72 He added that nothing in the Court's "recent Markman decision necessitates a different result than that reached by the Federal Circuit." n73 More interestingly, the Court seemed to respond to those who argued that juries were incapable of deciding such issues by suggesting that proper use of the Federal Rules of Civil Procedure would minimize the inconsistency of jury verdicts:

With regard to the concern over unreviewability due to black-box jury verdicts, we offer only guidance, not a specific mandate. Where the evidence is such that no reasonable jury could determine two elements to be equivalent, district courts are obliged to grant partial or complete summary judgment. If there has been a reluctance to do so by some courts due to unfamiliarity with the subject matter, we are confident that the Federal Circuit can remedy the problem. Of course, the various legal limitations on the application of the doctrine of equivalents are to be determined by the court, either on a pretrial motion for partial summary judgment or on a motion for judgment as a matter of law at the close of the evidence and after the jury verdict. Thus, under the particular facts of a case, if prosecution history estoppel would apply or if a theory of equivalence would entirely vitiate a particular claim element, partial or complete judgment should be rendered by the court, as there would be no further material issue for the jury to resolve. Finally, in cases that reach the jury, a special verdict and/or interrogatories on each claim element could be very useful in facilitating review, uniformity, and possibly postverdict judgments as a matter of law. We leave it to the Federal Circuit how best to implement procedural improvements to promote certainty, consistency, and reviewability to this area of the law. n74

The Court's opinion sounds like an invitation for the Federal Circuit to sanction "Markman-like" hearings to determine, "under the particular facts of a case, if prosecution history estoppel would apply or if a theory of equivalence would entirely vitiate a particular claim element" n75 Then as so often happens following "Markman hearings" partial or total summary judgment could be rendered by the trial judge "as there would be no further material issue for the jury to resolve." n76 A cynic might read into the Supreme Court's charge to the Federal Circuit to "implement procedural improvements" n77 a none-too-subtle subtext: "You figured out how to avoid the Seventh Amendment with literal

[*769] infringement, you should be smart enough to figure out how to do the same with the doctrine of equivalents."

V. One final Question: Now That We Have Seen What the Supreme Court Has Done About the DOE, What Should Be Done About the DOE?

As is Judge Newman, n78 I am convinced that the DOE is not the best way to achieve the purpose for which it arose, but I am far less optimistic than she is that the "technology-user" community is even interested in developing new procedures to better serve the "national interest" n79 or that the legislative process will be any more effective than the Court has been at resolving the problems associated with the doctrine of equivalents. However, as we are left with no other choice, I will make two modest proposals for legislative solutions.

The first proposal a "Band-Aid" would protect "innocent infringers" like Warner-Jenkinson with a statute similar to 35 U.S.C.

307(b). Such a statute might provide that "when one or more claims of a patent have been found to have been infringed under the doctrine of equivalents, that determination shall have the same effect as that specified in § 252 of this title for reissued patents on the right of any person who made, purchased, or used within the United States, or imported into the United States, anything found to have been infringed under the doctrine of equivalents or who made substantial preparation for the same, prior to a final judgment finding infringement under the doctrine of equivalents."

The second proposal major surgery would remove the doctrine of equivalents from judicial scrutiny and place it where it belongs in the Patent and Trademark Office. n80 This could be accomplished in two, or possibly three, steps. First, 35 U.S.C. § 271(a) would be amended to include a provision that states that "infringement may be found only where every limitation of the claim is found in the accused device literally." This would prevent courts and juries from finding infringement under the doctrine of equivalents.

Judge Newman may be correct in believing that the DOE alleviates the "strong pressure on filing the patent application early in

[*770] the development of the technology, often before the commercial embodiment is developed or all of the boundaries fully explored." n81 In her view, the current reissue provision does not provide an adequate alternative to the judicial DOE because the two-year limit on the enlarging of claims through reissue is too short:

Since the patentee is barred from enlarging the claims after two years from the date of issuance, later developments are excluded from the patent system unless they independently meet the criteria of patentability. From the originator's viewpoint, the inability to protect such developments may be a factor in recourse to the doctrine of equivalents. And from the viewpoint of the potential competitor, there is no opportunity to test possible encumbrances on later developments. n82

This problem is easily rectified. The two-year window for enlarging the scope of patent claims n83 could be eliminated, allowing claims to be broadened during the entire life of a patent, n84 thereby protecting the rights of the "originator." Section 252 would protect the rights of the "potential competitor."

But even that would not be enough for Judge Newman, as she seems to favor allowing the inventor to submit disclosures in addition to those already submitted. This could be accomplished merely by dropping the prohibition against the introduction of new matter into applications for reissue n85 while retaining the requirement that the reissued patent is restricted to "the invention disclosed in the original patent"

These simple changes would allow patentees to seek protection for "later developments [which do not] independently meet the criteria of patentability," n86 while allowing competitors to rely on the language of the original claim unless and until it is reissued.

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VI. Conclusion

Hilton Davis was the first substantive patent case the Supreme Court has taken since the Federal Circuit was established. n87 One must recognize that this opinion, like the Court's opinion in Markman, was written by a judge without any patent litigation experience who is also, significantly, one of the more conservative members of the Court. Justice Thomas' position could be summarized as: I don't know enough about patent law to know whether the system is "broken." But if it is, it's up to Congress - not this Court - to fix it. n88

While Hilton Davis is a disappointment, we should not be too surprised by the opinion. It is the product of a Court that has not been concerned with patent law for nearly 15 years. Judging by the depth of analysis in Markman and Hilton Davis, today's Court is content to remain unconcerned with patent law. Equally important, this is a conservative Court that is reluctant to make new law in areas within the legislative sphere. Perhaps we should be pleased it did anything, even if it wasn't much. Or would the "technology-user community" have been better off if the U.S. Supreme Court had simply denied certiorari in both Hilton Davis and Markman? Regrettably, I think it would have.

n1 According to the Court, "[u]nder this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 117 S. Ct. 1040, 1045, 41 U.S.P.Q.2d (BNA) 1865, 1868 (1997) (citing *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 609, 85 U.S.P.Q. (BNA) 328, 331-32 (1950)).

n2 See *Hilton Davis*, 117 S. Ct. at 1047-48, 41 U.S.P.Q.2d (BNA) at 1870.

n3 See *id.*

n4 *Graver Tank*, 339 U.S. at 608, 85 U.S.P.Q. (BNA) at 330.

n5 *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1521, 35 U.S.P.Q.2d (BNA) 1641, 1648 (Fed. Cir. 1995) (en banc).

n6 See *Hilton Davis*, 117 S. Ct. at 1054, 41 U.S.P.Q.2d (BNA) at 1875-76.

n7 *Graver Tank*, 339 U.S. at 609, 85 U.S.P.Q. (BNA) at 330.

n8 See *Hilton Davis*, 117 S. Ct. at 1052, 41 U.S.P.Q.2d (BNA) at 1873-74.

n9 That may have been wishful thinking as it did not seem that the issue was within the Court's grant of certiorari. See *id.* at 1053, 41 U.S.P.Q.2d (BNA) at 1874.

n10 See *id.*, 41 *U.S.P.Q.2d* (BNA) at 1874-75.

n11 See *id.* at 1049, 41 *U.S.P.Q.2d* (BNA) at 1871. Justice Thomas relied heavily on the late Judge Nies' analysis, thereby making the Court's decision a eulogy to her and a fitting tribute to one of the finest judges to have served on any federal court.

n12 See *id.* at 1053, 41 *U.S.P.Q.2d* (BNA) at 1874.

n13 See *id.* at 1051, 41 *U.S.P.Q.2d* (BNA) at 1873.

n14 In the Court's view, "[p]etitioner, which was found to have infringed upon respondent's patent under the doctrine of equivalents, invites us to speak the death of that doctrine." *Id.* at 1045, 41 *U.S.P.Q.2d* (BNA) at 1868.

n15 As the Court explained, "[f]our of the five dissenting judges viewed the doctrine of equivalents as allowing an improper expansion of claim scope, contrary to this Court's numerous holdings that it is the claim that defines the invention and gives notice to the public of the limits of the patent monopoly." *Id.* at 1046, 41 *U.S.P.Q.2d* (BNA) at 1869 (citing *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 *F.3d* 1512, 1537-38, 35 *U.S.P.Q.2d* (BNA) 1641, 1662 (Plager, J., dissenting)).

n16 Justice Ginsburg added a "cautionary note" in which she was joined by Justice Kennedy. See *Hilton Davis*, 117 *S. Ct.* at 1054, 41 *U.S.P.Q.2d* (BNA) at 1876 (Ginsburg, J. concurring).

n17 *Id.* at 1047, 41 *U.S.P.Q.2d* (BNA) at 1869-70.

n18 *Id.*, 41 *U.S.P.Q.2d* (BNA) at 1870.

n19 *Id.* at 1047 n.3, 41 *U.S.P.Q.2d* (BNA) at 1870 n.3.

n20 *Id.*

n21 56 *U.S.* (15 *How.*) 330 (1854).

n22 *Hilton Davis*, 117 *S. Ct.* at 1047 n.3, 41 *U.S.P.Q.2d* (BNA) at 1870 n.3 (quoting *Winans*, 56 *U.S.* (15 *How.*) at 347 (Campbell, J., dissenting)).

n23 Note the split decisions and strong dissents in both *Winans*, 56 *U.S.* (15 *How.*) at 343 (Campbell, J., dissenting) and *Graver Tank*, 339 *U.S.* at 612 (Black, J., dissenting).

n24 *Hilton Davis*, 117 *S. Ct.* at 1045, 41 *U.S.P.Q.2d* (BNA) at 1868.

n25 *Id.* at 1048-49, 41 *U.S.P.Q.2d* (BNA) at 1871.

n26 Indeed, not even the fact that *Graver Tank* had been decided prior to the adoption of the current Patent Act was sufficient to persuade the Court to reconsider these issues. The Court reasoned that "[t]he 1952 Patent Act is not materially different from the 1870 Act with regard to claiming, reissue, and the role of the PTO." *Id.* at 1047, 41 *U.S.P.Q.2d* (BNA) at 1870.

n27 *Id.* at 1048, 41 *U.S.P.Q.2d* (BNA) at 1870.

n28 This provision, which was not contained in the 1870 patent act but was added in 1952 states that "[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 *U.S.C.* 112 (1994).

n29 *Hilton Davis*, 117 S. Ct. at 1048, 41 U.S.P.Q.2d (BNA) at 1870-71. In fairness to the Court, this argument is not very convincing and indeed may not have deserved any further attention.

n30 329 U.S. 1, 71 U.S.P.Q. (BNA) 175 (1946).

n31 *Hilton Davis*, 117 S. Ct. at 1048, 41 U.S.P.Q.2d (BNA) at 1870 (quoting *Halliburton*, 329 U.S. at 8, 71 U.S.P.Q. (BNA) at 178 (citation omitted)).

n32 *Hilton Davis*, 117 S. Ct. at 1048, 41 U.S.P.Q.2d (BNA) at 1870.

n33 *Id.*, 41 U.S.P.Q.2d (BNA) at 1871.

n34 *Id.*

n35 *Id.*

n36 *Id.* at 1045, 41 U.S.P.Q.2d (BNA) at 1868.

n37 The Court viewed the Federal Circuit's decision as representing a 7-5 split, with the majority favoring the status quo and the dissent urging substantial revision of the doctrine of equivalents. See *id.* at 1046, 41 U.S.P.Q.2d (BNA) at 1869. However, this vote count is misleading because Senior Judge Cowen was counted among the seven. Judge Cowen participated in the en banc rehearing only because he was one of the members of the original Federal Circuit panel of three judges who first heard the appeal. Excluding Judge Cowen, the vote becomes even closer: 6-5. Additionally, there is Judge Newman's "concurring opinion." Although she joined in the per curiam holding because "our conclusion is in accord with precedent," she expressed serious misgivings over the doctrine of equivalents and called for legislative rather than judicial reform: I have, however, come to doubt that the doctrine of equivalents is the best way to achieve the result for which it arose, and I encourage the technology-user community to consider whether new procedures, through the legislative process, may better serve the national interest. *Hilton Davis*, 62 F.3d at 1529, 35 U.S.P.Q.2d at 1654 (Newman, J., concurring). Judge Newman should have been counted with the dissent, among those unhappy with the current state of the doctrine of equivalents and, if she is so counted, the "dissent" becomes a 6-5 majority. In reality, the Supreme Court sided with a majority of the Federal Circuit judges who were active at the time *Hilton Davis* was decided.

n38 *Hilton Davis*, 117 S. Ct. at 1048-49, 41 U.S.P.Q.2d (BNA) at 1871.

n39 *Id.* at 1045, 41 U.S.P.Q.2d (BNA) at 1868.

n40 It would seem that the court received more advice that it could use as amicus curiae briefs were submitted by nine individuals and organizations, including Professor Donald Chisum, the American Intellectual Property Law Association, the American Bar Association, the Iowa State Bar Association, the Houston Intellectual Property Law Association, the Intellectual Property Law Institute, and the California Association for the Advancement of Technology and Invention. See *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1514, 35 U.S.P.Q.2d (BNA) 1641, 1642.

n41 *Id.* at 1516, 35 U.S.P.Q.2d (BNA) at 1644 (citation omitted).

n42 It took the Federal Circuit nearly a year and a half to render its en banc decision in *Hilton Davis*. The Supreme Court was much quicker; it took it less than five months. But after reading the Court's decision, one wonders: What took so long!

n43 *Id.* at 1521-22, 35 U.S.P.Q.2d (BNA) at 1648 (emphasis added).

n44 That the Court appreciated the magnitude of a one-point difference in pH is evident from Justice Thomas' initial footnote which acknowledged that pH is measured "on a logarithmic scale, with each whole number difference representing a ten-fold difference in acidity . . ." *Hilton Davis*, 117 S. Ct. at 1045 n.1, 41 U.S.P.Q.2d (BNA) at 1868 n.1. But what everyone seems to have overlooked is that the trial court prohibited the defendant from "practicing ultrafiltration except at pressures above 500 p.s.i.g. and pHs above 9.01." *Hilton Davis*, 62 F.3d at 1516, 35 U.S.P.Q.2d (BNA) at 1644. Thus a process using a pH of 1 would be barred by the doctrine of equivalents. A solution with a pH of 1 is 100,000 times less acidic than a solution with a pH of 6. Is that also an insubstantial difference?

n45 *Hilton Davis*, 117 S. Ct. at 1049, 41 U.S.P.Q.2d (BNA) at 1871.

n46 *Id.* at 1054, 41 U.S.P.Q.2d (BNA) at 1876.

n47 *Id.*, 41 U.S.P.Q.2d (BNA) at 1875-76. The Court characterized the issue as merely a "debate regarding the linguistic framework under which 'equivalence' is determined." *Id.*, 41 U.S.P.Q.2d (BNA) at 1875. Perhaps the Court will next tell us that the controversy over pornography on the internet is merely a debate regarding the linguistic framework under which 'freedom of speech' is determined.

n48 *Id.* at 1049, 41 U.S.P.Q.2d (BNA) at 1871 (quoting *Bayer Aktiengesellschaft v. Duphar Int'l Research B.V.*, 738 F.2d 1237, 1238 222 U.S.P.Q.2d 649, 650 (Fed. Cir. 1984)).

n49 *Hilton Davis*, 117 S. Ct. at 1050, 41 U.S.P.Q.2d (BNA) at 1872.

n50 *Id.* at 1049, 41 U.S.P.Q.2d (BNA) at 1872.

n51 *Id.* at 1050, 41 U.S.P.Q.2d (BNA) at 1872. Specifically, "[t]he lower limit certainly did not serve to distinguish the Booth patent, which said nothing about pH levels below 6.0." *Id.* Furthermore, "[t]he parties disagree[d] as to why the low-end pH limit of 6.0 was included as part of the claim." *Id.* at 1046, 41 U.S.P.Q.2d (BNA) at 1868. Petitioner opined that the lower limit was added because below a pH of 6.0 the patented process created "foaming" problems and had not been shown to work below that pH level. Respondent disagreed, indicating that the process had been successfully tested to pH levels as low as 2.2, but offered no explanation as to why a pH of 6.0 rather than 2.2 had been selected. See *id.* at 1050 n.2, 41 U.S.P.Q.2d (BNA) at 1872 n.2.

n52 *Id.* at 1049, 41 U.S.P.Q.2d (BNA) at 1871 (emphasis added).

n53 *Id.* at 1050, 41 U.S.P.Q.2d (BNA) at 1872.

n54 *Id.*

n55 The challenger has the burden of proving an issued patent invalid by clear and convincing evidence. See 35 U.S.C. 282 (1994). But the burden has always been on the patentee to prove infringement by the preponderance of the evidence. See, e.g., *Bene v. Jeantet*, 129 U.S. 683 (1889).

n56 *Hilton Davis*, 117 S. Ct. at 1051, 41 U.S.P.Q.2d (BNA) at 1873.

n57 *Id.* (emphasis added).

n58 See *id.*

n59 *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 609, 85 U.S.P.Q. (BNA) 328, 330 (1950).

n60 See *id.*, 85 *U.S.P.Q. (BNA)* at 331.

n61 See 35 *U.S.C.* 252 (1994).

n62 *Hilton Davis*, 117 *S. Ct.* at 1051, 41 *U.S.P.Q.2d (BNA)* at 1873 (quoting *Winans v. Denmead*, 56 *U.S. (15 How.)* 330, 343 (1854)) (emphasis added).

n63 *Hilton Davis*, 117 *S. Ct.* at 1052, 41 *U.S.P.Q.2d (BNA)* at 1873.

n64 See *id.*

n65 To be deemed "an innocent," the infringer will generally be expected to have sought advice of independent counsel. Therefore, an infringer's innocent mistake will either be in selecting counsel or in relying on the innocent mistake of counsel.

n66 Justice Thomas "wonder[ed] how ever to distinguish between the intentional copyist making minor changes to lower the risk of legal action, and the incremental innovator designing around the claims, yet seeking to capture as much as is permissible of the patented advance." *Id.*, 41 *U.S.P.Q.2d (BNA)* at 1874. In Justice Thomas' view, the Federal Circuit suggested that "a person aiming to copy or aiming to avoid a patent is imagined to be at least marginally skilled at copying or avoidance, and thus intentional copying raises an inference rebuttable by proof of independent development of having only insubstantial differences, and [that] intentionally designing around a patent claim raises an inference of substantial differences." *Id.* Justice Thomas thought this approach "leaves much to be desired," *id.*, and so it does. The distinction should be between the independent developer and the one who tries to design around a patent of which he or she is well aware. Such a person can and should be held to the risk that his or her way of attempting to design around the patent failed either literally or under the doctrine of equivalents. While he or she may honestly believe that they have succeeded in avoiding the claim which was designed around, it will be up to an independent third party judge or jury to determine if he or she has succeeded.

n67 *Id.* The Court used the term "intent" rather than "equity" or "fairness," but its analysis made no provision for the independent developer who does not "intend" anything.

n68 *Id.* at 1053, 41 *U.S.P.Q.2d (BNA)* at 1874.

n69 See footnote 51, *supra*.

n70 It would have been non-obvious because the existing "art" taught away from using the lower pH. Thus, petitioner should have been able to patent its non-obvious, new and useful invention. But under the Court's decision, it could not practice the invention because it was included within the scope of the original invention. How absurd!

n71 *Id.*, 41 *U.S.P.Q.2d (BNA)* at 1874-75.

n72 *Id.*, 41 *U.S.P.Q.2d (BNA)* at 1875.

n73 *Id.*, 41 *U.S.P.Q.2d (BNA)* at 1875 (citing *Markman v. Westview Instruments, Inc.*, 116 *S. Ct.* 1384, 1392-93, 38 *U.S.P.Q.2d (BNA)* 1461, 1467-68 (1996)).

n74 *Hilton Davis*, 117 *S. Ct.* at 1053 n.8, 41 *U.S.P.Q.2d (BNA)* at 1875 n.8 (citations omitted).

n75 *Id.*

n76 *Id.* The decision then could be reviewed *de novo* by the Federal Circuit.

n77 *Id.*

n78 See *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1529, 35 U.S.P.Q.2d (BNA) 1641, 1654 (Fed. Cir. 1995) (Newman, J. concurring).

n79 Id.

n80 Fear not, Federal Circuit! Such a change would not dilute your ultimate control over all patent matters. You could still review the PTO's decisions de novo!

n81 *Id.* at 1536, 35 U.S.P.Q.2d (BNA) at 1660.

n82 Id.

n83 "No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent." 35 U.S.C. 251 (1994).

n84 While there would be no absolute time-bar to seeking reissue, courts might well consider the patentee's delay in seeking reissue when deciding whether to grant competitors "equitable intervening rights" and the scope and duration of such rights.

n85 "No new matter shall be introduced into the application for reissue." 35 U.S.C. 251.

n86 *Hilton Davis*, 62 F.3d at 1536, 35 U.S.P.Q.2d (BNA) at 1660.

n87 The other patent cases the Court has reviewed have either involved procedure, see, e.g., *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 508 U.S. 83, 26 U.S.P.Q.2d (BNA) 1721 (1993) (holding that the Federal Circuit erred in holding that questions concerning the invalidity of the claims became moot when the court concluded that those claims had not been infringed) or the relationship between federal and state law, see, e.g., *Bonito Boats, Inc., v. Thunder Craft Boats, Inc.* 489 U.S. 141, 9 U.S.P.Q.2d (BNA) 1847 (1989).

n88 As Justice Thomas stated the Court's position, "Congress can legislate the doctrine of equivalents out of existence any time it chooses. The various policy arguments now made by both sides are thus best addressed to Congress, not this Court." *Hilton Davis*, 117 S. Ct. at 1048, 41 U.S.P.Q.2d (BNA) at 1871.