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Who's Afraid of the Federal Circuit?

Jonathan Masur's argument regarding "Patent Inflation" rests on the assumption that PTO behavior is determined almost entirely by a desire to avoid reversal of its patent denials by the Federal Circuit. Although the U.S. Patent and Trademark Office (PTO) is certainly a weak agency over which the Federal Circuit has considerable power, Masur overestimates the extent to which high-level PTO administrators are concerned about Federal Circuit reversals and underestimates institutional influences that are likely to operate in a deflationary direction. The PTO is influenced not only by the Federal Circuit and other inflationary forces, but also by executive branch actors, industry players, and workload concerns that push in a deflationary direction.

INTRODUCTION

Jonathan Masur's very interesting article, *Patent Inflation*,¹ argues that the U.S. Patent and Trademark Office (PTO) will be significantly more likely, even under the Federal Circuit's relatively permissive approach to patentability, to issue false positives than false negatives—that is, more likely to grant patents for illegitimate claims than to deny patents for legitimate ones. In contrast to prior scholarship that has made similar points, Masur argues that this result can be derived strictly from a parsimonious model of the interaction between the PTO and the Federal Circuit. This model rests on several assumptions, of which the most important is that the PTO is almost entirely concerned with being reversed by the Federal Circuit. Not only is the PTO required to follow Federal Circuit pronouncements on substantive law strictly,² but the Federal

1. Jonathan Masur, *Patent Inflation*, 121 YALE L.J. 470 (2011).

2. *Id.* at 490.

Circuit “holds the power to significantly and directly affect the interests of the PTO’s administrators.”³

Specifically, Masur posits that PTO administrators will be motivated by a desire to avoid direct reversals by the Federal Circuit. Moreover, because the *ex parte* nature of patent examination creates a situation where direct reversals occur almost entirely in the context of patent denials, the agency will be extremely cautious about such denials. It will refuse to deny patents in any situation where a patent denial could conceivably be reversed by any three-judge panel of the Federal Circuit. Although a variety of pressures will deter the agency from granting *all* patent applications, the PTO will still produce many more false positives than false negatives.⁴

Masur does note the possibility of other pressures on the PTO. These include Congress, the President, and private interests. But he says that “it is unlikely that [these] interests exert a strong pull on PTO behavior.”⁵ As an institutional corrective, Masur proposes much more robust implementation of administrative proceedings (such as opposition proceedings) that allow third parties to contest a patent application fully. Because third parties would presumably appeal to the Federal Circuit if their administrative opposition was unsuccessful, frequent use of such proceedings would allow the PTO to be reversed directly—not simply when it denies patents but also when it sustains patents.⁶ Masur’s suggestion is quite timely, as Congress has finally—after many years of debate—implemented legislation that sets up full-blown trial-type proceedings for third parties that want to oppose patents.⁷

I agree with aspects of Masur’s argument. Indeed, I have argued that, because patent denials are more likely to represent true negatives than patent grants are to represent true positives, PTO denials and grants should be treated asymmetrically by reviewing courts.⁸ Additionally, the PTO’s relative weakness as an agency cannot be denied. Unlike most agencies with portfolios involving complex technological and scientific problems, the PTO does not have

3. *Id.* at 498.

4. *Id.* at 488-90.

5. *Id.* at 498.

6. *Id.* at 521.

7. See Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 6, 125 Stat. 284, 299-305 (2011) (to be codified at 35 U.S.C. §§ 311-19), available at <http://www.gpo.gov/fdsys/pkg/PLAW-112publ29/pdf/PLAW-112publ29.pdf>.

8. Arti K. Rai, *Allocating Power over Fact-Finding in the Patent System*, 19 BERKELEY TECH. L.J. 907, 911-12 (2004), available at http://www.btlj.org/data/articles/19_03_04.pdf.

rulemaking authority over the substantive questions that it addresses.⁹ The Federal Circuit appears to have taken this lack of rulemaking authority to mean that the PTO is entitled to no deference on *any* of its views of substantive law or policy (including views that may be expressed in adjudication of individual patents).¹⁰

I believe, however, that Masur both overestimates the extent to which high-level PTO administrators are concerned about Federal Circuit reversals and underestimates institutional influences that are likely to operate in a deflationary direction (i.e., to effect a contraction in the bounds of patentability). As to the first point, the history of patent law since the creation of the Federal Circuit is, in significant part, a history of expansion through Federal Circuit reversal of PTO patent denials. Of course, a single reversal—particularly in an area with little prior precedent—may simply represent the PTO guessing incorrectly about the Federal Circuit's preferences. But *repeated* PTO attempts to argue against the Federal Circuit cannot be explained away so easily. In at least three key doctrinal areas—the application of the nonobviousness requirement to biotechnology, the patentable subject matter inquiry for mathematical algorithm patents, and the so-called “teaching, suggestion, or motivation” test for combining prior art to show obviousness—the PTO has made such repeated attempts. One explanation for these actions is that, from the agency's standpoint, certain deflationary readings of patentability requirements reduce workload pressure and enhance overall reputational capital without unduly distressing patent applicants and industry players.

To be sure, concerns about workload and reputation may go only so far. In each case noted above, the PTO ultimately capitulated. And it appears to have capitulated without even attempting to appeal the Federal Circuit reversal to the Supreme Court. This pattern appears to be changing, however. Not only is the PTO influenced by other executive branch actors participating in certain appeals directly, it is also regularly filing Supreme Court amicus briefs that take

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9. See *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1294 (Fed. Cir. 2011) (“[T]he broadest of the PTO's rulemaking powers . . . does NOT grant the Commissioner the authority to issue substantive rules.” (quoting *Merck & Co. v. Kessler*, 80 F.3d 1543, 1549–50 (Fed. Cir. 1996)) (alteration and capitalization in *Therasense*) (citation omitted in *Therasense*)).
 10. For an extended discussion of the PTO's lack of substantive rulemaking authority and of the Federal Circuit's refusal to apply deference to PTO decisionmaking on substantive law or policy, see Stuart Minor Benjamin & Arti K. Rai, *Who's Afraid of the APA? What the Patent System Can Learn from Administrative Law*, 95 GEO. L.J. 269, 293–308 (2007).

positions contrary to those taken by the Federal Circuit. In many of these cases, the PTO's positions point in a deflationary direction.

Perhaps most interestingly, the PTO has in several cases actively exploited ambiguity in Federal Circuit case law to write *ex ante* guidelines that operate in a deflationary direction. In one of these cases, the PTO was pushed by agencies that tend to be wary of patents. Another case involved industries where relevant players are interested in at least a limited form of deflation. All in all, we see indications of the PTO positioning itself not as an agent of the Federal Circuit but, instead, as a potential competitor that is sometimes interested in deflation.

My account in this short response is positive, not normative. I explore normative issues at length elsewhere.¹¹ Briefly, however, if one's normative goal is patent deflation, the deflationary effect certain executive branch and industry actors appear to have had on PTO positions would suggest bolstering further the influence of these other actors.

I. (REPEATED) FEDERAL CIRCUIT REVERSAL OF PTO PATENT DENIALS

Since 1982, when the Federal Circuit was created, a significant percentage of patent law expansion has occurred in the context of Federal Circuit reversal of PTO patent denials. As noted above, a single reversal—even in a salient case—may simply reflect the PTO's misapprehension of the Federal Circuit's position. The same cannot be said for salient disputes where the PTO presses its position repeatedly. In the 1980s and 1990s, a pattern of repeated reversals emerged in two flagship areas of technological inquiry: biotechnology and software. In addition, starting in the 1990s, the Federal Circuit repeatedly reversed the PTO's attempts to demonstrate that prior art could be combined to show nonobviousness even in cases where the art did not reveal a specific documentary “teaching, suggestion, or motivation.”¹²

In the 1993 case *In re Bell*,¹³ the PTO pressed the argument that, for the average scientist working in the area, knowing a general method for selecting genes through the use of nucleotide probes, as well as the complete or partial

11. Arti K. Rai, *Patentability Policy Across the Executive Branch: What the DNA Patent Controversies Teach About Institutional Choice*, 61 DUKE L.J. (forthcoming 2012).

12. The “teaching, suggestion, or motivation” test is stated in *In re Sang-Su Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002). *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), criticized the Federal Circuit's strict application of this test. *Id.* at 415.

13. 991 F.2d 781 (Fed. Cir. 1993).

amino acid of the protein for which a gene of interest coded, would render the DNA base sequence for the gene obvious.¹⁴ The Federal Circuit in that case dismissed as largely irrelevant the PTO's assessment of biotechnological science.¹⁵ The court instead invoked analogies to chemical synthesis, analogies that had the effect of reducing nonobviousness in biotechnology to a novelty standard.¹⁶ Faced with a decision that might significantly increase the flow of dubious patent applications, the PTO redoubled its efforts. Two years later, in *In re Deuel*,¹⁷ the agency made its case again. In once again rejecting the PTO, the *Deuel* opinion pointedly cited to *Bell*.¹⁸

Another notable example of the PTO repeatedly holding the line on patentability occurred in the late 1980s and early 1990s with respect to software as patentable subject matter. In two controversies, the 1989 case of *In re Iwahashi*¹⁹ and the 1994 case of *In re Alappat*,²⁰ the PTO determined that the "means-plus-function" claims in question—essentially, claims to any computer "means" that could perform particular mathematical functions—did not represent patentable subject matter. According to the PTO, applications that could encompass (as these applications did) any general-purpose computer represented unpatentable mathematical algorithms.²¹ In both cases, the Federal Circuit reversed.²² The Federal Circuit's en banc opinion in *Alappat* chastised the PTO for ignoring statements in *Iwahashi* and other Federal Circuit opinions stating that claims written in "means-plus-function" format must be construed as strictly limited by physical structures recited in the specification.²³ The en banc court's displeasure may have been enhanced by the fact that high-level PTO administrators had stacked the appellate process within the PTO so as to ensure a rejection of the *Alappat* patent.²⁴

14. *Id.* at 783.

15. *Id.* at 784.

16. *See id.*

17. 51 F.3d 1552 (Fed. Cir. 1995).

18. *Id.* at 1559 ("The PTO's focus on known methods for potentially isolating the claimed DNA molecules is also misplaced because the claims at issue define compounds, not methods." (citing *Bell*, 991 F.2d at 785)).

19. 888 F.2d 1370 (Fed. Cir. 1989).

20. 33 F.3d 1526 (Fed. Cir. 1994) (en banc).

21. *Id.* at 1539; *Iwahashi*, 888 F.2d at 1371.

22. *Alappat*, 33 F.3d at 1545; *Iwahashi*, 888 F.2d at 1371.

23. *Alappat*, 33 F.3d at 1539.

24. *See id.* at 1530-36 (discussing the PTO's decision to set up an expanded appeals panel that overturned the original appellate panel's decision finding patentable subject matter).

Perhaps the most dramatic example of the PTO repeatedly being rebuffed by the Federal Circuit involved the requirement by many three-judge panels that PTO examiners identify a specific documentary “teaching, suggestion, or motivation” to combine prior art references when using these references for purposes of demonstrating obviousness. In cases spread over several years,²⁵ the PTO argued that its examiners should not always have to point to documentary evidence indicating that particular references should be combined. Rather, in keeping with pre-Federal Circuit case law on official notice,²⁶ examiners should be able to invoke their own knowledge of what constitutes ordinary skill in the art. Although Federal Circuit panels were not unanimous in rejecting the PTO’s desire to rely on “common knowledge and common sense,” a large number of panels penned excoriating opinions.²⁷ An agency that wanted to avoid reversal would (at least after the first opinion) have avoided all reference to common sense.

Of course, the PTO could have tried to appeal these repeated reversals on obviousness and patentable subject matter to the Supreme Court. Rather than appealing, the agency did ultimately capitulate. Whether this failure to appeal emerged from timidity on the part of the PTO or from an inability to convince the Department of Justice’s Office of the Solicitor General that the Supreme Court would be interested in an appeal is unclear.²⁸ In any event, both the Supreme Court and the Solicitor General would begin to show interest starting in the late 1990s.

25. See, e.g., *In re Sang-Su Lee*, 277 F.3d 1338, 1341-42 (Fed. Cir. 2002); *In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001); *In re Dembiczak*, 175 F.3d 994, 1000-01 (Fed. Cir. 1999).

26. E.g., *In re Bozek*, 416 F.2d 1385, 1390 (C.C.P.A. 1969) (noting that an examiner could, in reaching a conclusion of obviousness, rely on the “common knowledge and common sense of the person of ordinary skill in the art”).

27. *Sang-Su Lee*, 277 F.3d at 1341; see Benjamin & Rai, *supra* note 10, at 290-93 (discussing language in certain panel opinions).

28. Like other executive branch agencies (and in contrast to the FTC), the PTO lacks independent litigating authority. The Department of Justice (and specifically the Solicitor General) must sign off on any decision to appeal to the Supreme Court. Compare 15 U.S.C. § 56(a)(3) (2006) (granting the FTC litigating authority in the Supreme Court, subject to certain procedural requirements), and Office of Gen. Counsel, *A Brief Overview of the Federal Trade Commission’s Investigative and Law Enforcement Authority*, U.S. FED. TRADE COMM’N (July 2, 2008), <http://www.ftc.gov/ogc/brfovrwv.shtm> (describing the FTC’s independent litigating authority), with 28 U.S.C. § 516 (2006) (restricting the ability of agencies to litigate cases without Department of Justice approval).

II. THE EMERGENCE OF PATENT LAW (AND THE PTO) AT THE SUPREME COURT

As John Duffy observed in a recent article,²⁹ the Supreme Court's renewed interest in patent law has, ironically enough, been associated with an assertion of power by the executive branch. The executive branch—led by the Solicitor General—has participated either as a party or as an amicus in sixteen of the eighteen patent law cases decided by the Supreme Court since 1996. In ten of the sixteen cases, the Solicitor General disagreed squarely with the Federal Circuit. In all but one of these ten cases, the Solicitor General won out over the Federal Circuit.³⁰

Most notably for present purposes, the PTO co-authored the government brief in fifteen of the sixteen cases involving Solicitor General participation.³¹ In nine of these cases, the PTO put itself on record as disagreeing with the Federal Circuit. And the PTO has been on the winning side of *all nine* of these cases. Five of the nine cases—*Dickinson v. Zurko*,³² *Medimmune, Inc. v. Genentech, Inc.*,³³ *KSR International Co. v. Teleflex Inc.*,³⁴ *Microsoft Corp. v. AT&T Corp.*,³⁵ and *Quanta Computer, Inc. v. LG Electronics, Inc.*³⁶—point in a deflationary direction.

29. John F. Duffy, *The Federal Circuit in the Shadow of the Solicitor General*, 78 GEO. WASH. L. REV. 518 (2010).

30. These statistics are derived from updating Figure 8 in Professor Duffy's article, *id.* at 539, with the result in *Bilski v. Kappos*, 130 S. Ct. 3218 (2010), which was not decided at the time of the article's publication, as well as with three patent cases decided in the Court's 2010 Term: *Microsoft Corp. v. i4i Ltd. Partnership*, 131 S. Ct. 2238 (2011); *Board of Trustees of the Leland Stanford Junior University v. Roche Molecular Systems, Inc.*, 131 S. Ct. 2188 (2011); and *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060 (2011).

31. See Duffy, *supra* note 29, at 540. In addition to the cases cited by Duffy, the PTO co-authored the government's brief in *i4i*, 131 S. Ct. 2238, and *Global-Tech*, 131 S. Ct. 2060. The single exception is *Roche Molecular Systems*, 131 S. Ct. 2188, a case involving a statute (the Bayh-Dole Act, 35 U.S.C. §§ 200-212 (2006)) administered not by the PTO but by the National Institute of Standards and Technology.

32. 527 U.S. 150 (1999).

33. 549 U.S. 118 (2007).

34. 550 U.S. 398 (2007).

35. 550 U.S. 437 (2007).

36. 553 U.S. 617 (2008).

For purposes of PTO power (and day-to-day operations), two victories over the Federal Circuit stand out.³⁷ The first was the Supreme Court decision in *Dickinson v. Zurko*.³⁸ In this case, to which the PTO was a party, the Supreme Court held that, because the PTO was an agency subject to the ordinary requirements of the Administrative Procedure Act (APA), its fact-finding in patent denials was to be reviewed under highly deferential APA standards.³⁹

Perhaps even more important was the Supreme Court's 2007 decision in *KSR International Co. v. Teleflex Inc.*⁴⁰ In that case, the government filed an amicus brief detailing the ways in which a rigid requirement that examiners (or district courts) show "teaching, suggestion, or motivation"—particularly in documentary form—posed an unnecessary burden and was contrary to accepted administrative law principles of official notice.⁴¹ In a unanimous opinion, the Supreme Court agreed.⁴²

In *KSR*, the Supreme Court discussed briefly the longstanding patent law principle that although an invention that is "obvious to try" is not necessarily obvious, it can be obvious if the universe of possible solutions is finite and predictable.⁴³ Although the *Bell* through *Deuel* line of cases discussed above was only nominally concerned with obvious-to-try jurisprudence (instead, the cases took the formalist position that methods are not appropriate prior art for claims drawn to chemical compounds), the PTO seized upon this short discussion to set up a test case, *In re Kubin*.⁴⁴ In its 2009 *Kubin* decision, the Federal Circuit unanimously agreed with the PTO and finally interred *Bell* and *Deuel*.⁴⁵ Thus, the PTO, in tandem with the Solicitor General and the Supreme Court, has pushed the Federal Circuit in a deflationary direction.

37. Although *Medimmune*, 549 U.S. 118, *Microsoft*, 550 U.S. 437, and *Quanta*, 553 U.S. 617, all limit the power of the patent holder, they do not address the issues of patent application validity decided by the PTO.

38. 527 U.S. 150 (1999).

39. *Id.*

40. 550 U.S. 398 (2007).

41. Brief for the United States as Amicus Curiae Supporting Petitioner at 21-24, *KSR*, 550 U.S. 398 (No. 04-1350).

42. *KSR*, 550 U.S. 398.

43. *Id.* at 421.

44. 561 F.3d 1351 (Fed. Cir. 2009).

45. *Id.*

III. EXPLOITING AMBIGUITY IN FEDERAL CIRCUIT JURISPRUDENCE

At the level of the Supreme Court appeal, the PTO has clearly been influenced by (and perhaps emboldened by) other executive branch actors. Supreme Court appeals are, however, perhaps the very definition of *ex post* policymaking. *Ex post*, the available policy space is often quite constrained. Even though the “patents are property rights” trope has many limitations, courts are legitimately concerned by the fact that they act quite late in the game, with the potential for significantly disturbing reasonable, investment-backed expectations. For this reason, arguably the most interesting moves by the PTO have involved attempts to shape the debate *ex ante*, even in the absence of rulemaking authority over validity requirements.

Many of these PTO attempts have been in the life sciences. Here the executive branch actors that have emboldened the PTO have been the Department of Health and Human Services (HHS) and the National Institutes of Health (NIH). In the early 1990s, the NIH first raised the question of whether innovation goals would be served by patents on gene-related research that was several steps upstream from a full gene of known biological function.⁴⁶ By the late 1990s, the NIH had come to a conclusion. As large numbers of patent applications drawn to gene fragments of unknown biological function began to be filed, the NIH (and its expert consultants) sounded an alarm over the transaction-cost impediments that requirements to license numerous upstream patents could pose for subsequent research.⁴⁷ As a doctrinal matter, the NIH was concerned that these patent applications did not meet the utility requirement for patentability.⁴⁸

Although the PTO was initially resistant—perhaps because the Federal Circuit had recently rebuffed it for interpreting utility too strictly in the 1995 *Brana* case⁴⁹—a consequence of consistent NIH pressure was PTO guidelines

46. See Bernadine Healy, *Special Report on Gene Patenting*, 327 *NEW ENG. J. MED.* 664, 665 (1992).

47. See Michael A. Heller & Rebecca S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 *SCI.* 698, 699 (1998). At the time, Professor Rebecca Eisenberg was an expert consultant to the NIH.

48. Cf. Harold Varmus, *Government*, in NAT'L RESEARCH COUNCIL, *INTELLECTUAL PROPERTY RIGHTS AND THE DISSEMINATION OF RESEARCH TOOLS IN MOLECULAR BIOLOGY: SUMMARY OF A WORKSHOP HELD AT THE NATIONAL ACADEMY OF SCIENCES, FEBRUARY 15-16, 1996*, at 66, 68 (1997), available at http://www.nap.edu/openbook.php?record_id=5758 (expressing concern that applications did not meet utility requirement).

49. *In re Brana*, 51 F.3d 1560 (Fed. Cir. 1995).

(proposed in 1999 and finalized in 2001)⁵⁰ that raised the patentability bar posed by the utility requirement. These guidelines, upheld by the Federal Circuit in its 2005 *In re Fisher* decision,⁵¹ allowed the PTO summarily to reject all claims to gene fragments of unknown biological function. Particularly given the contemporaneous *Bell* through *Deuel* line of case law that effectively eliminated the non-obviousness requirement in genomics, the PTO's utility guidelines appear to have been important in forestalling the development of a genomic patent thicket.⁵²

Despite accepting the PTO's utility guidelines in *In re Fisher*, in keeping with its traditional approach, the Federal Circuit accorded the agency no deference.⁵³ It also dismissed as irrelevant policy arguments made by the PTO and its many academic and industry amici regarding how a strict interpretation of the utility standard had thwarted the formation of patent thickets.⁵⁴ Nonetheless, it seems plausible that the PTO had created favorable facts on the ground that would be difficult for the Federal Circuit to overturn.

On occasion, the PTO has also acted ex ante of its own accord. In recent years, many industry players have complained about how poorly claims on issued patents, particularly in information technology (IT), perform their notice function. Given the volume of complaints from important industry players, a response by the PTO was not surprising. Thus, in a prominent 2008 case, *Ex Parte Miyazaki*,⁵⁵ the PTO determined that examiners should find a patent claim "indefinite" (and thus reject it) if the claim is "amenable to two or more plausible claim constructions."⁵⁶ This interpretation of the indefiniteness requirement is significantly stricter than that applied by the Federal Circuit. The PTO justified its approach by noting that Federal Circuit precedent permits the agency to treat claims differently in prosecution than would courts in litigation because applicants have an opportunity to amend claims in prosecution.⁵⁷ The *Miyazaki* approach was recently expanded and further

50. Utility Examination Guidelines, 66 Fed. Reg. 1092 (Jan. 5, 2001); Revised Utility Examination Guidelines; Request for Comments, 64 Fed. Reg. 71,440 (Dec. 21, 1999).

51. 421 F.3d 1365 (Fed. Cir. 2005).

52. See Michael M. Hopkins et al., *DNA Patenting: The End of an Era?*, 25 NATURE BIOTECHNOLOGY 185, 186 (2007) (noting that many industry and public sector interviewees cited utility guidelines as having helped to forestall thickets).

53. *Fisher*, 421 F.3d at 1372.

54. *Id.* at 1378.

55. No. 2007-3300, 89 U.S.P.Q.2d (BNA) 1207 (B.P.A.I. Nov. 19, 2008).

56. *Id.* at 1211.

57. *Id.*

elucidated in guidelines.⁵⁸ In this case, because the industry most affected by the guidelines (IT) favors at least a limited form of deflation, the PTO was able to bolster its reputational capital by acting in a deflationary manner.

CONCLUSION

By noting deflationary institutional pressures for which Professor Masur does not account, I do not mean to suggest that we have reached any sort of optimum level of patenting. How one might assess optimality (or even a second-best solution) is a complicated question that I address in a longer article.⁵⁹ Moreover, although I have identified cases in which workload and reputational concerns operated in a deflationary direction, one could also imagine many cases in which the easy response was simply to grant patents. But if we believe further deflation is necessary, one systematic institutional corrective might involve not only greater use of opposition proceedings within the PTO (Professor Masur's preferred choice), but also empowerment of non-PTO players who tend to be warier of patents than the median patent insider.

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58. Supplementary Examination Guidelines for Determining Compliance with 35 U.S.C. 112 and for Treatment of Related Issues in Patent Applications, 76 Fed. Reg. 7162 (Feb. 9, 2011).

59. See Rai, *supra* note 11.