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# Patent Reforms Must Focus On The U.S. Patent Office

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## Patent Reforms Must Focus On The U.S. Patent Office

### INTRODUCTION

As aptly explained elsewhere in this Special Issue, much patent law reform has already taken place during the last five years in the courts.<sup>2</sup> Many of the remaining alleged problems with the patent system have administrative solutions within the operations of the U.S. Patent & Trademark Office (“USPTO” or the “Office”) and would likely not have developed had the USPTO been functional and timely in granting quality patents. It is imperative that USPTO operations be the focus of any patent “reform”: no reformed statutory scheme can work well if the USPTO doesn’t. For the most part, dysfunction at the USPTO stems from long-term failure to invest in our nation’s patent examiner corps and the infrastructure that supports their important work.

Reforms should focus on two areas: quality of issued patents that should not issue, and erroneous rejection and backlog of non-issued patent applications that should issue. The growing unexamined application backlog is a great damper on innovation. Pendency at the USPTO has grown to the point that four out of five granted patents have compensatory patent term adjustment due to USPTO’s failure to meet the time goals set by Congress. Irregularities in examination procedure and administrative rulemaking have plagued the Office, resulting in successful legal challenges against the Office and causing costly distractions for the Office and the patent community. This article reviews the necessary augmentation of the

patent examiner corps capabilities, the current practices at the USPTO that gave rise to significant dysfunction in its examination operations, and suggests some specific areas for reform.

### MASSIVE STRENGTHENING OF USPTO EXAMINER CORPS CAPABILITIES IS REQUIRED

**The Examiner Force:** Much has been written about the shortfall in the number of well-trained examiners due to substantial attrition of experienced examiners, leaving a corps dominated by examiners with no more than three years of experience. To a significant extent, this attrition is due to the Office’s chronic inability to spend the funds it collects in user fees, either for salaries or for long term infrastructure investments.<sup>3</sup> This misbudgeting, in turn, arises from the USPTO’s historic failures to correctly model<sup>4</sup> and project its workload.<sup>5</sup> The Office is limited in the pay levels it can offer examiners, making it harder to recruit and retain them.

- First, additional funds must be appropriated so that the USPTO can pay examiner salaries that are competitive with similarly-educated and skilled specialist professionals in the private sector.
- Second, it is imperative that we recognize that basic changes in examiners’ working conditions, production goals and incentives are required to ensure that examiners have adequate time for examination.
- Third, in order to develop and retain the expertise in the

examining corps, it is essential to provide examiners with more non-examination time for continuing professional development, in the same way that their peers do: reading the technical literature and attending technical trade shows.

The examining corps expertise should rest on two “pillars”: examiners should first be scientists, engineers or technical experts in their art area, and second be specialists in patent examination procedures. While some examiners currently fit both of these “pillars,” the USPTO today lacks the resources to ensure and foster the former.

1. Dr. Ron D. Katznelson is the president of Bi-Level Technologies of Encinitas, CA. He can be reached at [ron@bileveltech.com](mailto:ron@bileveltech.com).

2. Matthew J. Dowd, Conversations with Two Chief Judges. *Medical Innovation & Business Journal*, this issue pg. 60 (2010).

3. Nicholas P. Godici, Adequately Funding the USPTO: A Critical Problem That Must Be Solved. *Medical Innovation & Business Journal*, this issue pg. 73 (2010) (discussing the diversion of user fees).

4. Ron D. Katznelson, My 2010 wishes for the U.S. Patent Examiner, (January 8, 2010). Available at <http://j.mp/RDK-2010-wishes>. (See pages 12-13 discussing USPTO’s failures and its refusal to disclose its flawed pendency model).

5. This continues to this day. For example, during its board of appeals’ first annual conference on April 7, 2010, the USPTO continued to insist that it will be able to adequately staff the new Post-Grant Review provision of Patent Reform. A number of audience members, including two federal judges, asked specific questions about how the USPTO would create the necessary procedures and handle the caseload. The USPTO’s only substantive answer was that the USPTO would ensure it would handle the load during the first four years, because the USPTO would exercise its right to limit the number of post-grant reviews. However, by silence, the USPTO conceded that it had no reason to believe it would be able to match personnel to load after those four years, and had no plans for how to do so without draining essential staff from elsewhere.



## PATENT REFORM

Work goals for U.S. patent examiners require them to examine more than twice as many applications as their European counterparts.<sup>6</sup> EPO examiners spend more non-examining time during their work day on specialized PCT search services, more time for better prior art searches and professional reading, and more time to think and be correct before rejecting an application. The USPTO must have sufficient funding to give examiners time to do their jobs. As importantly, the USPTO must be able to pay U.S. examiners for the time it takes them to maintain their proficiencies and status, and knowledge of their technological fields. This, in turn, should help to increase their retention. An important additional component for accomplishing this is to ensure that expertise in technical fields is built within the Office. The Office must restore the robust prior art search functions to the examiner corps and reduce contracting out such prior art searches as a regular way of doing business.<sup>7</sup> It will also enable the USPTO to gain market share in international PCT search services, with all the concomitant benefits entailed,<sup>8</sup> including revenue support for a larger examining corps. Finally, another important component in improving examiner corps efficacy is the proper alignment of examiner quality measures and incentives with the social costs of patent examination errors, as discussed further below.

**The Patent Classification System:** A classification system is a way to arrange technical documents, patent applications and patents according to the technical features described therein. Think of it as a specialized relative of the Dewey Decimal Classification System or the Library of Congress

classification. The classification system helps arrange documents so that documents that give specific technical answers can be quickly found when a patent application poses specific questions. It assists in quickly finding documents disclosing subject matter identical or similar to the invention for which a patent is claimed. The same document may be classified in several classes or subclasses. The classification system is an important examination quality tool, as it facilitates efficient search and identification of the most relevant prior art. Computerized keyword searches have their place, but are no substitute for an adequately-categorized library of prior art.

In the last decade, classification activity at the USPTO declined by two thirds, despite the continued exponential growth in new patent applications and other prior art to be classified.<sup>9</sup> The USPTO's apparent under-investment in the classification infrastructure of our national knowledge repository system is troubling. Ending the subdivision of classes and subclasses effectively allows classes and subclasses to grow and become coarser and to deteriorate. This detracts from the USPTO's ability to support applicants' and examiners' searches and the examination process. In addition, the degradation of classification weakens the key tools that examiners use, effectively weakening their end-result proficiency. The USPTO should restore the patent classification system to its important rightful place.

### THE HARMFUL ASYMMETRY IN USPTO'S EXAMINATION POLICY

The USPTO is often criticized for insufficient quality of issued patents. But looking at only half the issue leads to short-sightedness

and error. Patent application examination errors come in *two* types, erroneously allowing an application that does not meet legal patentability requirements, *and* erroneously rejecting an application that does. Both types of error result in consumer welfare losses as they create social costs for applicants, the USPTO, third parties and society as a whole. Many of the problems at the USPTO come from the USPTO's failure to consider the social cost of *rejection* errors.

Allowance errors receive more attention because they are more visible: a wrongly-issued patent is visible when the patentee asserts it in litigation or licensing, when it comes up for public ridicule, or when competitors must invest in unnecessary R&D to design around invalid claims, or simply gives up an innovation because of an erroneously-issued patent.

Costs of rejection errors are less visible, but no less real. Inventors bear the cost of additional Patent Office fees and attorney fees for applicants to seek USPTO correction of bad rejections by filing

6. Ron D. Katznelson, My 2010 wishes for the U.S. Patent Examiner, (January 8, 2010). Available at <http://j.mp/RDK-2010-wishes> (See Figure 3 at p. 6, showing that USPTO examiners complete an average of 65 applications per year as compared to 31 applications by an average EPO examiner).

7. U.S. Department of Commerce, Inspector General, *FY 2009 FISMA Assessment of the Patent Cooperation Treaty Search Recordation System*, PTOC-018-00, Final Inspection Report No. OAE-19731, at p. 1, (November 2009), available at <http://www.oig.doc.gov/oig/reports/2009/OAE-19731.pdf>. (prior art searches and patentability reports for PCT applications submitted to USPTO are performed by Cardinal IP, a private contractor).

8. Ron D. Katznelson, My 2010 wishes for the U.S. Patent Examiner, (January 8, 2010). Available at <http://j.mp/RDK-2010-wishes> (See Figure 2 and the accompanying text).

9. *Id.* (Classification activity as measured by the number of new subclasses established per year has declined from 4,000 to a third of that. See Figure 1 and accompanying discussion at page 3).

Requests for Continued Examination (“RCE”)<sup>10</sup> and/or appeal briefs. Inventors bear costs of delays in obtaining patent protection they deserve, and in their loss of statutory rights (if the rejection succeeds). The USPTO bears the cost of doing work over when it was done wrong the first time, especially because the USPTO’s error correction mechanisms require escalation to more-senior (and therefore scarcer) personnel. Costs of erroneous rejections fall on third parties: their investment opportunities are reduced when public notice of issued patents is delayed. Society as a whole bears costs if the applicant simply gives up fighting a wrongful rejection, or even if the wrongful rejection merely delays issuance of a patent to which the applicant is entitled: private investments and development of inventions are delayed, and inventors’ incentives to disclose inventions and teach new knowledge and discoveries are reduced.

The legal and economic academy has spilled a great deal of ink on the first type of examination errors—allowance errors. Scholarly and media attention have amplified this inherent bias by focusing almost exclusively on erroneous allowances, but have been almost silent on erroneous rejections. Treatises and books on the social cost of “bad” patents, “questionable” patents, patents of “dubious validity,” or the need to improve “patent quality” abound. While there is no doubt that there would be benefits to improved patent quality *ceteris paribus*, empirical statistical support for assertions that the USPTO issues “bad” patents is often based on fundamentally flawed studies.<sup>11</sup> These one-sided analyses fail to consider the costs that attempts to raise patent quality have inflicted on the

economy, and totally ignore adaptive responses that businesses and investors have taken and will take if the suggested policies are implemented.

Why have well-meaning people so consistently ignored the relative costs of patent rejection errors? This is likely due to the fundamental asymmetry in the resulting **observable** impact of examination errors. Assertion of an alleged “bad patent” can result in public outcry from entire industries. In contrast, an erroneous rejection is only clearly visible to one party—the applicant—a party that seldom has any incentive to publicize its difficulties. However, the social costs of rejection errors, while largely invisible, have ripple effects: inventions are not exploited, start-ups may go belly-up and no one is left to tell the story. Other adverse effects include underinvestment in innovative research and disruptive advances, and overinvestment in incremental and less risky developments that require no new patent protection. Thus, the most-easily observable data have an inherent bias: allowance errors are reflected in bad things that happen, while rejection errors exert their greatest cost in good things that do not.

Nothing exhibits the degree of asymmetry in discourse more than the prevailing biased vocabulary on the subject. The most commonly used term is “**patent quality**.” However, rejected applications are not patents and a **patent** must have been issued for its **quality** to be evaluated. Thus, this term is strictly a measure of **allowance** errors. The term that should be used instead is “**examination quality**” because it is unbiased between allowance and rejection errors and because it correctly identifies the problem: **examination**—not patents. It also more accurately

reflects the USPTO’s legal obligations: applicants are “entitled” to patents, and if on examination “**it appears**” that the applicant is entitled to a patent under the law, the USPTO “**shall**” issue them, unless the USPTO carries out its legal obligation to make a *prima facie* showing of non-entitlement.<sup>12</sup>

Some electronics and software manufacturers that found themselves losing patent infringement cases took partially legitimate concerns and disproportionately created massive “patent quality” lobbying campaigns that found their way into national editorials and congressional hearings. They also supported a few vocal university professors that focused on the harm associated with allowance errors. These campaigns have had substantial influence on public policy makers and on focusing USPTO operations solely on allowance errors, and to disregard rejection errors. Even the Federal Trade Commission was half-blinded: the FTC issued a report that focused only on the harm due to “questionable patents,” and apparently used “balance” only in a word

10. RCE can be filed under 35 U.S.C. § 132(b) in an attempt to amend claims in order to overcome an examiner’s final rejection based on new grounds or where an applicant and an examiner simply have not had an adequate exchange regarding the issues surrounding certain claims in the application. The USPTO considers an RCE a new application, although it preserves the serial number of its predecessor application.

11. Ron D. Katznelson, Bad Science in Search of “Bad” Patents, *Federal Circuit Bar Journal*, Vol. 17, No. 1, pp. 1-30, (August 2007). Available at <http://works.bepress.com/rkatznelson/1/>; See also Patrick A. Doody, What is a Bad Patent?, *Medical Innovation & Business Journal*, this issue pg. 21 (2010) (“If we cannot define a bad patent, we cannot expect to solve the problems such patents are alleged to have caused.”).

12. 35 U.S.C. §§ 102 and 151; *In re Oetiker*, 977 F.2d 1443, 1445 (Fed.Cir.1992) (The U.S. Patent Office bears the initial burden of presenting a *prima facie* case of unpatentability, and until it does so, an inventor is “entitled” to grant of the patent).



## PATENT REFORM

for its title.<sup>13</sup> The USPTO Director established a policy that he would grant Director-ordered reexamination of patents if there were a “public outcry,” which was readily supplied by those attempting to smear their opponents’ patents and their “quality.”<sup>14</sup> The unsupported argument was broadly made by these parties that lower allowance rate equates to higher patent quality. The USPTO (intentionally or unintentionally) created a default philosophy of rejection that resulted in plummeting application

pair of eyes” review program applies only to allowances—never to final rejections. In examiners’ merit reviews, erroneous allowances may lead supervisors to take adverse actions, whereas virtually no adverse actions are taken against examiners due to final rejection errors.

Academics suggesting remedies for the “patent quality” problem have been similarly biased towards allowance errors. Several scholars have proposed to remove the clear and convincing evidence standard

### The USPTO’s enhanced rejection techniques have caused a substantial rise in final rejection error rates and has cost the public dearly.

allowance rates. As I show below, the USPTO’s enhanced rejection techniques have caused a substantial rise in final rejection error rates and has cost the public dearly.

This quality bias and asymmetry in USPTO operations has reached unprecedented levels in the last few years. In its quality control, the Office reviews more than 5,000 allowances per year to estimate and publish the allowance error rate (though strikingly the USPTO publishes almost nothing about how it gathers the data or analyzes it to determine allowance quality).<sup>15</sup> The USPTO does not publish, and apparently does not perform, any statistically significant end-of-process study of final rejection errors. The USPTO Manual of Patent Examining Procedure (“MPEP”) provides for reopening prosecution only after the quality review program finds an erroneous allowance but not after erroneous rejection.<sup>16</sup> The Office’s “second

for the presumption of validity under 35 U.S.C. § 282<sup>17</sup> because they believe that “too many” patents are issued improvidently.<sup>18</sup> Curiously, these proposals would leave intact the presumption of valid examiner rejections including the strong deference the agency receives on judicial review under administrative law.<sup>19</sup> If examination is not robust enough to warrant the presumption of patent validity,

13. Federal Trade Commission, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy* (October, 2003), available at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>. (The term “questionable patent” used in the report is ill defined and the report appears biased in taking the side of the “questioner.” The report uses the term “questionable patents” or patents of “questionable validity” 83 times and uses 5 times the term “bad patents,” but refers only once to the fact that errors of the second kind—rejection errors—might occur.)

14. Sean A. Passino, Stephen B. Macbuis and Harold C. Wegner, Re-examinations are ordered due to ‘public outcry’, *National Law Journal*, (May 10, 2004) p. S2, available at [http://www.foley.com/publications/pub\\_detail.aspx?pubid=2084](http://www.foley.com/publications/pub_detail.aspx?pubid=2084).

15. Notably, in its recent request for public comment on “Enhancement in the Quality of Patents”, at 74 Fed. Reg. 65093 (December 9, 2009), the Office asks the public to comment on its current quality measures. The Notice mentions “Allowance Compliance Rate and In-Process Review” without giving the public any indication where information on these measures can be found. None appears available on the USPTO’s web site. In response to Freedom of Information Act (“FOIA”) requests for information on these reviews, the USPTO provided no meaningful information.

16. MPEP § 1308.03 (“If, during the quality review process, it is determined that one or more claims of a reviewed application are unpatentable, the prosecution of the application will be reopened.”).

17. *Cf. SRAM Corp. v. AD-II Eng’g, Inc.*, 465 F.3d 1351, 1357 (Fed. Cir. 2006) (“Under the patent statutes, a patent enjoys a presumption of validity, see 35 U.S.C. § 282, which can be overcome only through facts supported by clear and convincing evidence.”).

18. Doug Lichtman and Mark A. Lemley, Rethinking Patent Law’s Presumption of Validity, 60 *Stanford Law Review*, 45 (2007); Alan J. Devlin, Revisiting the Presumption of Patent Validity, 37 *Southwestern University Law Review*, pp. 323-369, (2008); Fed. Trade Comm’n, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy* 8-10 (2003), <http://www.ftc.gov/os/2003/10/innovationrpt.pdf> (calling the presumption “unjustified” and saying that the “burden can undermine the ability of the court system to weed out questionable patents”); Matthew Sag & Kurt Rohde, Patent Reform and Differential Impact, 8 *Minn. J.L. Sci. & Tech.* 1, 63 (2007) (recommending the preponderance of the evidence standard for initially granted patents but a higher standard for patents surviving post-grant opposition proceedings); F. Scott Kieff, The Case for Registering Patents and the Law and Economics of Present Patent-Obtaining Rules, 45 *Boston College Law Review*, 55 (2003) (advocated patent registration reform that removes the presumption of validity); Michael Abramowicz, & John E. Duffy, Ending the Paternity Monopoly, 157 *U. Pa. L. Rev.* 1541 (June 2009) (proposing a patent granting system employing private examination institutions conferring lower presumption of validity levels); *but see* Etan S. Chatlynnne, The Burden of Establishing Patent Invalidation: Maintaining A Heightened Evidentiary Standard Despite Increasing “Verbal Variances,” 31 *Cardozo L. Rev.* 297 (2009) (concluding that the presumption of validity - and the clear and convincing standard for establishing factual predicates of invalidity - should not be altered).

19. Applicants’ burden in overcoming the deference the agency receives in its claim rejections is elevated to even higher levels of asymmetry by the “broadest reasonable interpretation” claim construction standard used at the USPTO. See Dawn-Marie Bey & Christopher A. Cotropia, The Unreasonableness of the Patent Office’s ‘Broadest Reasonable Interpretation’ Standard, 37 *AIPPLA Quarterly Journal*, 285-319 (July 16, 2009). Available at SSRN: <http://ssrn.com/abstract=1434918>.

what makes its fact-finding more reliable to warrant a presumption of a valid rejection?<sup>20</sup> Note also that many alleged examiner errors do not raise fact-finding questions, but are rather due to examiner failure to follow agency procedures or the law, which should receive no deference on judicial review, and should not be tolerated by the agency itself.

Despite some commentators' qualitative acknowledgement of the importance of social costs due to rejection errors, this author is unaware of any published discussion of the *relative costs* of allowance and rejection errors. The allowance-error-centric policy has perpetuated the status quo at the USPTO, as no guidance seemed forthcoming as to the degree of change that is required to balance the USPTO examination policy, procedures and incentives. To that end, a recent quantitative analysis by this author provides a definitive answer: *rejection errors are more harmful to consumer welfare than allowance errors.*<sup>21</sup> It is not surprising that our patent statute is actually consistent with this notion: "The Director shall cause an examination to be made of the application and the alleged new invention; and if on such examination *it appears* that the applicant is entitled to a patent under the law, the Director *shall* issue a patent therefor." 35 U.S.C. § 131 (emphasis added). It is significant that the statute does not command: "and if on such examination it appears that the applicant is *not* entitled to a patent under the law, the Director shall *deny* a patent therefor." Unfortunately, USPTO operations are inconsistent with both its legal obligation to give the applicant the benefit of the burden of proof, or the economic reality

that rejection errors harm society more than allowance errors.

### CONSEQUENCES OF USPTO'S ESTABLISHED CULTURE OF INCENTIVIZING REJECTION OVER CORRECTNESS

This first management error, focusing myopically on allowance errors and ignoring rejection errors, created pressures on the USPTO that gradually became cancerous, and then metastatic. Applicants know the law well enough to know when the USPTO's rejection is wrong, and seek correction and the patent protection to which the law entitles them. However, the USPTO's mechanisms for correcting its own errors are costly for the USPTO as well as for applicants, so rejection errors increased loads and costs for the USPTO. As loads on one part of the USPTO's error-correction apparatus after another increased past the breaking point, the USPTO apparently began to simply ignore the law as it sought ways to hold back the error-correction burden its own management attitudes had created.

USPTO's previous management often spoke of patent quality measures as synonymous with its allowance rate measures: that is, USPTO proclaimed to Congress, to the public, and to examiners that rejections are good, and allowances are bad. The precipitous decline of the allowance rate discussed in a companion article in this Issue<sup>22</sup> was touted by then-USPTO-management as evidence that the "quality" of patents had increased.<sup>23</sup> However these USPTO comparisons only presented allowance error rates and not rejection error rates. Clearly, no allowance errors will be incurred if the USPTO rejects all patents, but the probability of erroneous rejection will

reach 100%. The importance of enhanced rejection techniques was communicated to examiners: many attorneys have described to me their experiences wherein examiners privately told them that their supervisors had directed them

20. One author who does address the allocation of relative deference accorded to USPTO in allowances and rejections argues that consideration and awareness of the significant institutional bias in favor of grants should overcome any strong presumption in favor of agency competence in the fact-finding associated with such grants. This consideration lacks factual support and is apparently derived through misapprehension of USPTO examination procedures. See Arti K. Rai, Allocating Power over Fact-Finding in the Patent System, 19 *Berkeley Tech. L.J.* 907 (2004) (Arguing at 911 that examiners are "unlikely to deny even questionable applications" because of time shortages and because of examiners' prevailing bias in favor of granting patents - erroneously asserting that it is much easier for examiners to secure a final disposition by granting a patent than by denying one under the examiner incentive system (which, contrary to the assertion, counts both a final rejection and an allowance as a disposal); erroneously asserting at 917 that the examiner cannot provide evidence for the record about common knowledge in an industry, ignoring 37 C.F.R. § 1.104(d)(2) and MPEP § 2144.03 that are specifically designed to permit examiners to rely on common knowledge and personal knowledge for entering examiner affidavits in evidence; arguing at 912 without support that when the USPTO denies a patent, "the fact-finding associated with the USPTO's analysis is much more likely to be accurate," an assertion that would not be shared by the experience of many patent prosecutors; and mischaracterizing rejections as the only type of agency decisions supported by evidence, ignoring the fact-finding role in allowances and in 37 C.F.R. § 1.104(e), under which examiners may identify for the record the *facts* leading to an allowance.).

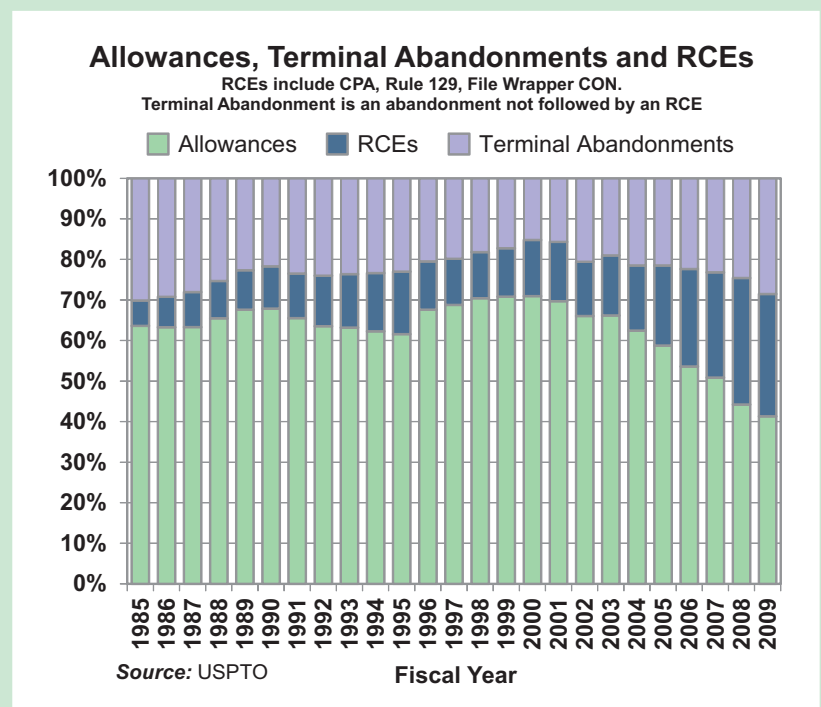
21. Ron D. Katznelson, "Patent Examination Policy and the Social Costs of Examiner Allowance and Rejection Errors," *Stanford Technology Law Review Symposium on PTO Reform*, Stanford, CA. (Feb. 26, 2010). Available at: <http://j.mp/Examination-Quality>; Ron D. Katznelson, "Comments submitted to the US Patent Office on enhancing the quality of examination" (March 8, 2010), at Section I. Available at <http://j.mp/Exam-Qual-Comments>.

22. Nicholas P. Godici, Adequately Funding the USPTO: A Critical Problem That Must Be Solved, *Medical Innovation Business Journal*, this issue pg. 73 (2010) (See Figure 1).

23. John Love, *Present and Future Perspectives of the USPTO*, presented to the San Diego Intellectual Property Law Association, (June 6, 2007). See Slides 7-9. Available at <http://www.sdipla.org/resources/SanDiego071.ppt>.

**Figure 1.**

Relative share of allowances, RCEs and terminal abandonments in USPTO utility patent application disposals.



to reject applications, or would not permit them to allow cases despite cogent and convincing showings of patentability because the supervisor's allowance rate would not be low enough. USPTO examiners had a running joke, that the USPTO was putting the "NO" in "INNOVATION."

The statistics of declining allowances published by the USPTO do not tell the full story of the USPTO's "reject, reject, reject" policy. Over the last few years, information obtained through FOIA requests and through administrative record discovery in lawsuits against the USPTO revealed the true effects. Upon an examiner's final rejection, an applicant has three options: (a) accept the final rejection and terminally abandon

the application; (b) appeal to the Board of Patent Appeals and Interferences ("BPAI"), an agency administrative patent law tribunal within the USPTO; or (c) file an RCE, a procedure under which an applicant pays a fee in order to obtain further opportunity to negotiate claim amendments with the examiner. Thus, an application disposal can occur in one of three ways: by allowance, by filing an RCE (after final rejection and a technical abandonment of the predecessor application), or by terminal abandonment. Figure 1 shows the relative share of these three possible disposal outcomes at the USPTO over the last 25 years.

Note that as the USPTO's enhanced rejection techniques depressed allowance rates, termi-

nal abandonments increased only slightly because applicants apparently did not yield, but instead pursued their legal rights using the RCE procedure and appeals. Thus, by increasingly issuing unwarranted or premature final rejections, examiners often induced a shift of substantive examination to the RCE phase. In effect, enhanced rejection merely *delayed* ultimate allowance and increased costs for both applicants and the USPTO, with only little change in *actual* allowance rates.

This is clearly shown in Figure 2 for the very class of RCEs that the USPTO had attempted to suppress in rulemaking limiting the filings of second or later RCEs. Fortunately, a federal district court enjoined the USPTO from implementing these rules.<sup>24</sup>

A remarkable aspect of the data in Figure 2 is that aggregate allowance rate of second or later RCEs appears nearly a mirror reflection of the application allowance rate, indicating an "exchange" wherein allowances of the former application type complement allowances of the latter, making-up for some of the rejections.

Increases in RCE filings were not the only costly consequences of the USPTO enhanced rejection techniques. Rejection errors also dramatically increased, forcing a huge increase in appeals to seek correction of the USPTO's rejection errors. What Figure 1 and Figure 2 do not show, is the other important component in the fate of finally-rejected patent applications—applications for which appeals are filed and are subsequently circulated back to the examiner corps, adding to the

24. *Tafas v. Dudas*, 541 F.Supp.2d 805 (E.D.Va. 2008).

ballooning backlog of pending applications.

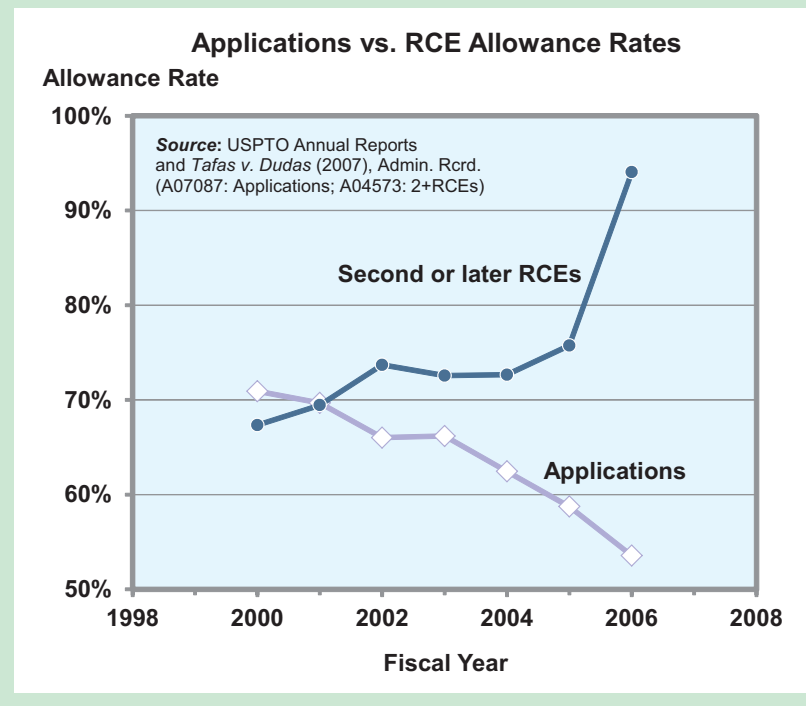
Figure 3 shows the number of appeal briefs filed and the number of appeals that actually reached the BPAI. While the number of appeal briefs filed has quadrupled in recent years, the number of appeals reaching the BPAI has not increased much. The gap between the upper and lower curves reflects the result of a review by the Pre-Appeal Conference panel including the examiner, the examiner's supervisor and another peer examiner. This gap between the two curves corresponds to the number of cases in which the examiner's rejection lacked even the minimal merit to warrant allowing the appeal to go forward to the BPAI. For these cases, the USPTO summarily vacates the examiner's decision and the application is either allowed or circulated back for further prosecution on other grounds of rejection. The large increase in the gap between the curves of Figure 3 directly shows the large increase in rejection error rate from the USPTO's enhanced rejection techniques, and the costs that this imposed on both applicants and the USPTO itself.

As part of its attempt to put a thumb in the holes that the USPTO itself drilled in the dike, the USPTO attempted to curb appeals by doubling or tripling the costs to inventors of filing appeals, and limiting their ability to make proper showings of patentability.<sup>25</sup> After a significant challenge under

25. USPTO, *Rules of Practice Before the Board of Patent Appeals and Interferences in Ex Parte Appeals*, Proposed Rule, 72 Fed. Reg. 41472, (July 30, 2007); USPTO, *Rules of Practice Before the Board of Patent Appeals and Interferences in Ex Parte Appeals*, Final Rule, 73 Fed. Reg. 32938, (June 10, 2008).

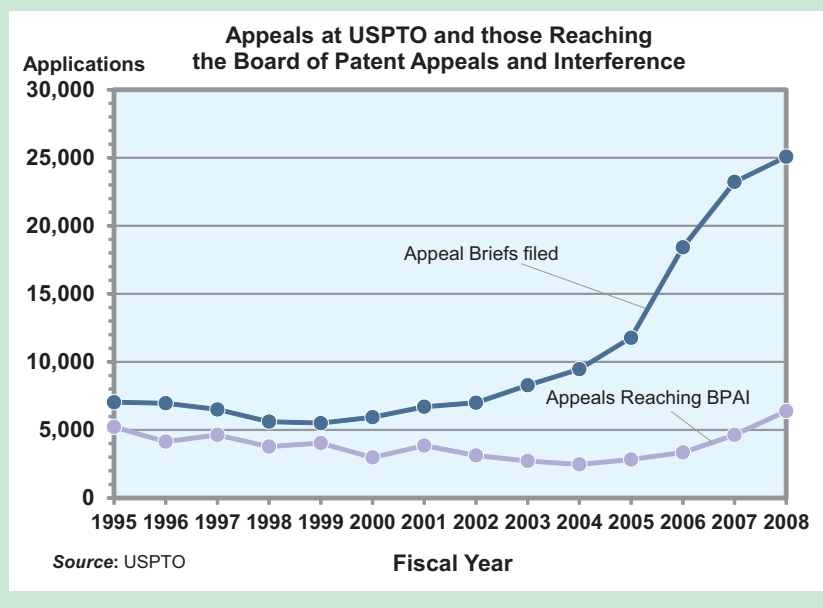
**Figure 2.**

Allowance rate of applications and second or later RCEs.



**Figure 3.**

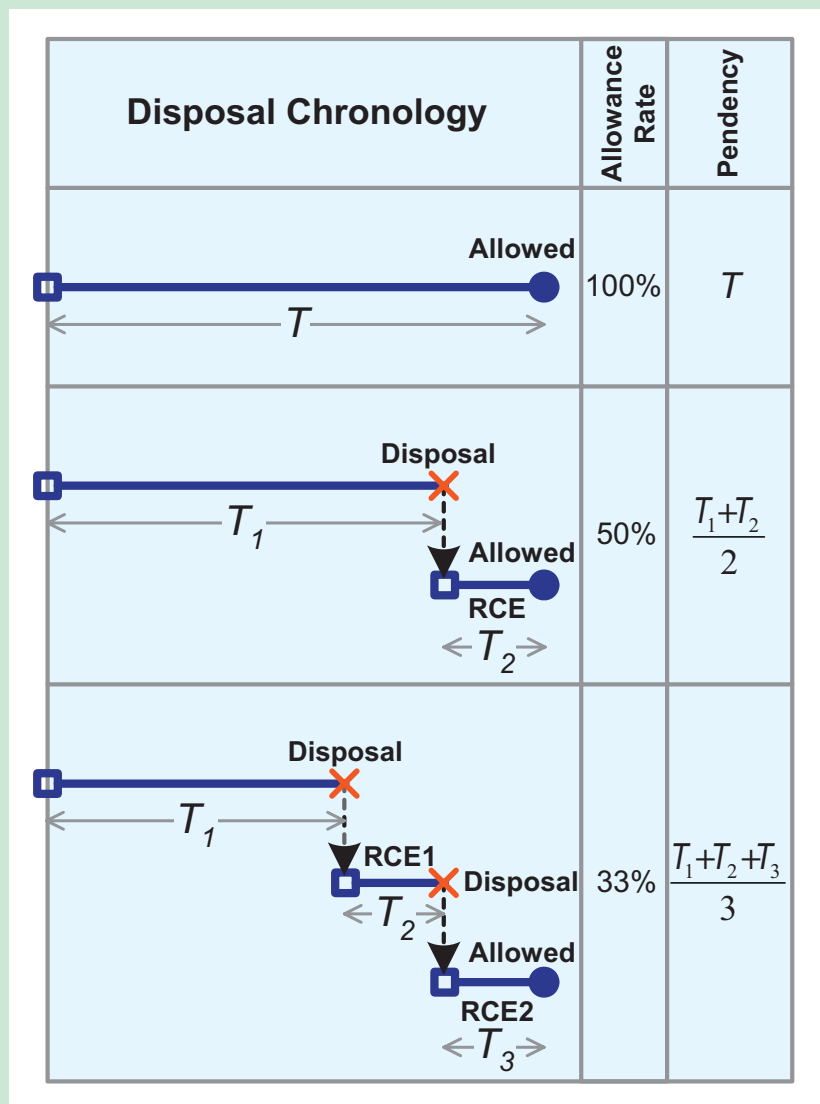
Appeal briefs filed and those reaching the BPAI after the Pre-Appeal Conference.





**Figure 4.**

The actual effects of RCE filings on USPTO reported allowance rate and reported average pendency.



the Paperwork Reduction Act by Rick Belzer, David Boundy and this author,<sup>26</sup> the White House Office of Management & Budget (“OMB”) refused to approve the paperwork burdens in the new appeal rules and forced the USPTO to withdraw them on the morning they were to go into effect.<sup>27</sup>

It appears that the misdirected incentive structures at the USPTO have had additional powerful and perverse effects. Management’s performance reviews and goals were apparently tied to “quality” measures such as allowance rate and to average pendency. For years, the definitions of

these metrics were conveniently skewed to reflect more favorable results. In recent years, the skew became more extreme due to increasing examiner incentives to reject and shift substantive examination to RCEs. Figure 4 shows the effect of increasing the relative filings of RCEs on USPTO *reported* metrics.

Because the Office considers an abandonment followed by an RCE an application “disposal” (shown as  $\times$  in the figure), and because it counts each RCE as a distinct application with pendency measured from its filing date rather than the initial application’s filing date, the average pendency reported by the USPTO is substantially shorter than the real pendency. For example, consider the application shown at the bottom of Figure 4, which is finally rejected after say 32 months ( $T_1 = 32$ ), followed by a cascade of two RCEs, prosecuted for, say, 8 months each ( $T_3 = T_2 = 8$ ) until an ultimate allowance. Excluding publication delay, a patent will be granted after a pendency of 48 months. However, the weighted contribution of this application chain to USPTO’s calculation of overall *reported* average pendency would only be 16 months. This deceptive metric is matched only by another perverse distortion of the average allowance rate metric. Because the USPTO regards abandonment in favor of a subsequent RCE as a disposal, it regards this example as having three disposals with only one allowance, resulting in a weighted contribution

26. Ron D. Katznelson, *Comments submitted to OMB under the Paperwork Reduction Act on US Patent Office appeal rules*, (November 17, 2008). Available at <http://bit.ly/Appeal-ICR-Comments>.

27. See <http://www.uspto.gov/main/homepagenews/2008dec10.htm>.

to the overall *reported* average allowance rate of only 33%. Counting RCE disposals as distinct for purposes of *Office level* overall metrics is not only counterfactual, but it also violates USPTO's own published directives that RCEs do not count as disposals for Office level performance measures.<sup>28</sup> The growing share of RCEs exacerbated the Office's misreporting of both average pendency and allowance rate: the reported 35 months in 2009 highly understates the actual average pendency, and the USPTO remarkably understates its allowance rates.

A further possible structural perverse incentive at the USPTO to "transfer" substantive examination into induced RCEs is rooted in another disturbingly rising metric that the Office does not disclose despite it being the only statutory criterion for pendency. Normally, prosecution delays due to the USPTO in initial applications may entitle applicants to compensatory Patent Term Adjustment under 35 U.S.C. §154(b), ("PTA"). However RCE prosecution time of any duration is excluded from applicants' PTA credit<sup>29</sup> and by inducing an RCE, the Office can continue substantive examination while "stopping the clock" on its PTA debt to the applicant.

Clearly, the "decreasing" allowance rate and the understated average pendency are largely illusions created by manipulating or distorting metrics, and the metrics are further skewed by the perverse "reject, reject, reject" incentives that former USPTO management gave examiners. The record shows that previous USPTO management's actions have inflicted unprecedented harm on U.S. patent applicants. Strong corrective action must now be taken.

## SOME RECOMMENDED USPTO REFORMS

The problems described above developed under prior USPTO managements. Since assuming his new post as the Director of the USPTO, David Kappos began making significant improvements and changes. Recent welcome developments under Director Kappos include the Office's decision to provide an additional two hours per application and expand non-examining time allotments for examiners such as examiner-initiated interviews and increased resources available for examiner certification. The Office has also begun reaching out to its former examiners in an effort to recruit them back. Director Kappos also articulated what should have been the Office's policy all along: "Patent quality does not equal rejection" and there is evidence that movement away from the excessive weight on allowance errors have started to take place. It is not enough, however, to merely attenuate examiner costs for making rejection errors. As further explained here, the Office should pursue a *balance in weighing* these errors with rejection errors. These important actions should be followed by an aggressive effort not only to increase the Office's force but also to build public confidence in the Office management's ability to project requirements and sustain the growth of the force. Additional important necessary reforms are detailed below.

**Operational Metrics:** USPTO management's "measurable organization and individual goals in key operational areas"<sup>30</sup> may have long been improperly implemented. Neither the office nor the Department of Commerce disclose the criteria and goals set out in the Patent Commissioner's annual

performance agreement under 35 U.S.C. § 3(b)(2)(B), which provides for a performance bonus up to 50% of annual salary based on objective criteria. Do they match the USPTO's public policy goals as set forth by Congress, or are they merely criteria that happen to be easy to measure? Are they measured fairly and in a statistically valid way, or are they prone to manipulation of the bonuses? No one knows what these criteria are, because the USPTO does not publish them, and will not disclose them even in response to a FOIA request. These goals, no doubt, propagate down to middle management and to the examining corps. The Office should put the criteria and goals of this agreement to a Notice and Comment proceeding to ensure public participation in crafting sound criteria and goals that would correctly drive the incentive systems at the USPTO.

For example, *average pendency* should not be one of the "measurable organizational" goals, as it has been shown to be prone to short-term manipulation and have perverse effects, as described above. While average pendency can be a useful descriptor, setting any specific *average* pendency goal is arbitrary, as it has no direct connection with objective criteria that determine examination queuing stability. Most importantly, *average pendency is not* one of

28. MPEP §1705.III ("These same items [including RCEs] constitute the "disposals" for performance evaluation of examining art units and TCs. However, disposals at the *Office level* consist only of allowances and abandonments.") (emphasis added).

29. See §154(b)(1)(B)(i)

30. 35 U.S.C. § 3(b)(2)(B) ("The [patent Commissioner's] annual performance agreements shall incorporate measurable organization and individual goals in key operational areas as delineated in an annual performance plan agreed to by the Commissioners and the Secretary.").



the statutory pendency requirements. Rather, express statutory pendency goals are set forth in 35 U.S.C. § 154(b)(1)(A)(i) – First Office Action within 14 months; and 35 U.S.C. § 154(b)(1)(B) – Patent grant within 3 years. Therefore pendency goals must be tied to measures indicative of USPTO’s ability to meet its statutory § 154(b) obligations. *i.e.*, PTA measures. To this author’s best knowledge, the USPTO has yet to compile and publish such statistics. Another operationally relevant queuing stability metric which the Office should adopt is the queuing Loading Ratio—the ratio between the incoming application filing rate and the examiner corps’ disposal capability. This measure should be

**Balancing examination quality measures:** In view of the analysis referred to previously (showing that rejection errors are more costly to society than allowance errors), it is recommended that the USPTO augment its end-of-process allowance error measures with end-of-process final rejection error measures and adopt a weighted examiner incentive system that adopts equal weights for allowance and rejection errors. Under such a system, USPTO policies must ensure that the consequences to examiners for making allowance errors should be no more adverse than making rejection errors.

**Aligning allotted resources with examination burdens required to achieve acceptable**

The article also shows evidence suggesting that, on average, the current examiner goal system fails to provide the minimum baseline examination time required in many technology workgroups **regardless of technology**.<sup>32</sup> In particular, examiner performances in workgroups that are allotted an average of fewer than 25 hours per application appear unreliable, with a wide spread in error rates. These results are rather charitable to the Office because they contain no data on rejection errors. The article concludes that examiners do meet their production goals—but at the expense of quality. The current examiner production goal system has been recently described by Dabney Eastham.<sup>33</sup> While certain improvements were recently made, more fundamental changes are long overdue.

In recent comments on examination quality submitted to the USPTO, this author outlined a specific proposal for setting an improved examiner production system.<sup>34</sup> As a prerequisite, the proposal involves the institution of a composite measure of examination errors by equally weighing probability of allowance error and the probability of final rejection error. It calls for establishing a balanced examiner incentive system and measuring examination errors under various examination time-allotment constraints. From

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compiled per workgroup, as it directly predicts whether the Office has sufficient resources to reduce the backlog.

Allowance rate should be eliminated as a “quality” proxy. The incentives it creates in every level of USPTO’s management hierarchy only detract from high quality and efficient examination. Allowance error rate is only a partial measure of examination quality that must be augmented as described below. Examiner production goal metrics as currently implemented are problematic and substantial improvements are proposed next.

**examination error rates—A new Count System:** Examination with finite resources cannot be made error-free. The USPTO should commence a thorough review and conduct statistical performance studies and measurements in order to design a better examiner production-goal system. The history of the examiner production goal system is described by this author in a recent article.<sup>31</sup> The system is based on an ad hoc 1966 consensus, but not on any objective measurements of the number of hours required to achieve acceptable level of errors in relation to application attributes.

31. Ron D. Katznelson, My 2010 wishes for the U.S. Patent Examiner, (January 8, 2010). Available at <http://j.mp/RDK-2010-wishes>. (See Section 2).

32. *Id.*, Figure 6.

33. Dabney Eastham, Patent Examiners: The Performance Appraisal Plan System and the Count System Initiatives, Part 1, *New Matter*, Vol. 35, No. 1, pp. 19-31, (2010).

34. Ron D. Katznelson. “Comments submitted to the US Patent Office on enhancing the quality of examination” (March 8, 2010), at Section II. Available at <http://j.mp/Exam-Qual-Comments>.

such measurements, a method of deriving new art-unit targets of examination hours to be spent per application is described. Based on the measurements, a regression analysis is proposed to empirically establish the dependence of the required examination hours on application attributes by art-unit. It is proposed that the discovered dependency would be the basis of an application specific variable Count System.

**Adopting Deferred Examination Procedures:** In early 2009, the USPTO held a roundtable and had solicited public comments on the advisability and benefits for instituting an Examination On Request system, or what is often called Deferred Examination.<sup>35</sup> Commenting parties were generally supportive of adopting such a system, including this author, who submitted a detailed proposal and a model analyzing the workload savings.<sup>36</sup> The proposal described a legal framework that would permit the implementation of such a system under existing law without any congressional action. The model, attached as an appendix to the comments, estimated that workload savings of 15%–25% can be realized upon adoption of such a system. Unfortunately, it appears that the USPTO has done nothing for almost a year on this matter.

**Improve compliance with Administrative laws:** USPTO's rulemaking attempts over the last few years were no less than frontal assaults on patentee's rights and the rule of law. At least four rules packages that the Office attempted to promulgate were either enjoined by a federal court or stopped by OMB. The USPTO's commitment to the Administrative Procedure Act, the Regulatory Flexibility Act,

the Paperwork Reduction Act, and Executive Order 12,866 and their guarantees of predictable agency procedure and protections against agency overreaching has been less than encouraging.

Fundamental reforms in the Office's core practices are also long overdue. In some circumstances, the MPEP and other published agency guidance have been knowingly used for years to circumvent plain statutory language and USPTO's own codified federal rules.<sup>37</sup> First, examiners cite the MPEP as if it were law against applicants. Second, when the MPEP uses mandatory language to specify examiner conduct, most examiners treat the MPEP as non-binding "ten suggestions." The USPTO persists in erring on both fronts. Under decades of administrative law, agency staff manuals are binding on the agency that issues them, but not on the public.<sup>38</sup> Over three years ago, the Executive Office of the President issued the *Final Bulletin for Agency Good Guidance Practices*, which reminds agencies of these statutory obligations.<sup>39</sup> The USPTO has simply ignored this order, apparently implementing none of its directives.

Third, the USPTO must enforce its own rules. For example, Chapter 2100 of the MPEP gives examiners sound instructions on examination that, if consistently followed by the USPTO, would vastly improve predictability and efficiency. Yet, the MPEP repeatedly states USPTO's refusal to enforce its written procedures: breach is "neither appealable nor petitionable."<sup>40</sup> This cannot be correct, as it contradicts 37 C.F.R. § 1.181(a)(1), which guarantees that any issue that is not "appealable" is necessarily "petitionable." The USPTO must amend the MPEP

and assume management oversight over examiners.

When the USPTO fails to comply with the law, the legitimate expectations of applicants guaranteed by the administrative law are frustrated, and the examination-prosecution process breaks down. The pervasive breach of administrative law must be addressed by the new Director. An administrative law compliance observance program should be implemented to correct lax procedures. It could substantially improve the cooperative efficiency between the USPTO and applicants. ■

35. USPTO, *Request for Comments and Notice of Roundtable on Deferred Examination for Patent Applications*, 74 Fed. Reg. 4946, (January 28, 2009).

36. Ron D. Katznelson, "Comments submitted to the US Patent Office on deferred examination for patent applications", (May 29, 2009). Available at: <http://works.bepress.com/rkatznelson/59>

37. For example, under the statute and under USPTO's federal rules, "if two or more independent **and** distinct inventions are claimed in one application, the Director may require the application to be restricted to one of the inventions" (35 U.S.C. § 121; 37 CFR § 1.142). In contrast, the Office continues to enforce restrictions when inventions are "independent **or** distinct" per MPEP § 803. By the use of the conjunctive "and" rather than "or," the statute and the federal rule prescribe significantly narrower circumstances permitting restrictions. By contravening this plain language and relying on MPEP's "or" clause, examiners issue restrictions more frequently than permitted by law.

38. 5 U.S.C. § 552(a), 553 (describing steps an agency must take to bind the public—which the USPTO has not taken with respect to the MPEP); *Vitarelli v. Seaton*, 359 U.S. 535, 545 (1959) (when an agency acts contrary to its own rules, the resulting action is "illegal and of no effect."); *In re Kaghan*, 387 F.2d 398, 401 (CCPA 1967) (An applicant should be entitled to rely not only on the statutes and rules but also on the provisions of the MPEP).

39. Executive Office of the President, *Final Bulletin for Agency Good Guidance Practices*, OMB Memorandum M-07-07, <http://www.whitehouse.gov/omb/memoranda/fy2007/m07-07.pdf> (Jan. 18, 2007); 72 Fed. Reg. 3432 (Jan. 25, 2007).

40. *C.f.* MPEP §§ 2106(1); 2107(1); 2141; 2163, ("perceived failure by Office personnel to follow these Guidelines is neither appealable nor petitionable.").