

**UNITED STATES DISTRICT COURT FOR
THE EASTERN DISTRICT OF VIRGINIA
(Alexandria Division)**

TRIANAFYLLOS TAFAS,

Plaintiff,

v.

**JON W. DUDAS, in his official capacity as
Under-Secretary of Commerce for Intellectual
Property and Director of the United States
Patent and Trademark Office, and the UNITED
STATES PATENT AND TRADEMARK
OFFICE,**

Defendants.

**CIVIL ACTION: 1:07cv846 (JCC/TRJ)
and Consolidated Cases**

**DECLARATION OF ROBERT N. FENILI, PH.D IN SUPPORT
OF PLAINTIFF'S MOTION FOR SUMMARY JUDGMENT
CONCERNING REGULATORY FLEXIBILITY ACT CLAIM**

ROBERT N. FENILI, Ph.D., being duly sworn, deposes and says:

1. I am over the age of eighteen (18) years and I understand the obligations of an oath.
2. The statements made in this Declaration are true and correct and are made on the basis of my personal knowledge, unless indicated to be based upon information and belief, in which case I believe them to be true.
3. I have been retained by Kelley Drye & Warren LLP to independently evaluate and provide my expert opinion concerning the United States Patent and Trademark Office's ("USPTO") Certification Analysis under the Regulatory Flexibility Act dated June 29,

2007 (the “RFA Certification Analysis”), a copy of which is attached as Exhibit A.¹ (See Administrative Record (“A”) at A.08270 to A.08306).

4. More specifically, I have been asked to analyze and comment upon whether the RFA Certification Analysis provides sufficient support for the USPTO’s conclusion that its proposed new continuation and claims rules “will not result in significant economic impacts on a substantial number of small entities,” as stated in the Certification Analysis at p. 2 at A.08274 and in the Regulatory Flexibility Act (“RFA”) compliance section of the USPTO’s new rules that were published on August 21, 2007, entitled “Changes to Practice for Continuing Examination Filings, Patent Applications Containing Patentably Indistinct Claims, and Examination of Claims in Patent Applications; Final Rule” (the “Rules”). See 72 Fed. Reg. 46716, 46830-31 (Aug. 21, 2007); (A.09390 to A09518).

5. I hold a Ph.D. in economics from Virginia Polytechnic Institute (1975) and a bachelor’s and master’s degree in economics from Illinois State University (1970 and 1971, respectively). I am employed as an Economist, engaging in economic consulting and litigation support, by Georgetown Economic Services, an economic consulting firm, which has been doing business since 1985. Prior to joining Georgetown Economic Services, I was an independent economic consultant and employed by Synergy Inc., an economic consulting firm from 1981 to 1987. From 1975 to 1981 I was employed as a staff economist at the Federal Trade Commission, the U.S. General Accounting Office, and the U.S. Department of Energy. A copy of my resume is attached hereto as Exhibit B.

¹ The USPTO’s Certification Analysis includes a report expressly prepared by ICF International at the USPTO’s request (the “RFA Certification Analysis”).

6. I have provided expert economic assessments, analyses, reports, and articles involving litigation and regulatory actions. In addition, I have prepared economic impact studies and have qualified as an expert and have testified in state and federal courts. I consider myself an expert in the field of economic analysis. I have reviewed the USPTO's RFA Certification Analysis and related portions of the administrative record for the Rules in order to attempt to replicate the calculations and explore the assumptions made by the USPTO.

7. The documentation underlying the RFA Certification Analysis is not transparent. It is my expert opinion that the major conclusions in the RFA's Certification Analysis are made without adequate support or documentation. Indeed, I was not able to find the basis for many assumptions used in the calculations that lie behind many of the findings in the RFA Certification Analysis. For example, the basis for the calculations of the numbers in Exhibit 4-2 of the RFA Certification analysis, (Ex. A, p. 18 section 4.1; A.08290), are not replicable from the data in the record.

8. My examination of such assumptions, and the conclusions derived from them, indicates that the USPTO's RFA Certification Analysis does not rest on firm foundations and that the following USPTO assumptions are without basis in the administrative record:

(a) It is assumed that a "substantial number" of small entities exist "if the number of entities impacted at a given impact threshold ... [of] three percent of [their] revenue ... constitutes at least 20 percent of all small entities that apply for patents." (See RFA Certification Analysis, Ex. A, p. 24, section 5.1.4(1), pg. 28, section 5.3; A.08296, A.08300). No basis is given for this assumption.

(b) It is assumed that a small entity patent applicant who is an individual inventor must have an income of at least \$75,000, more than 50% above the median U.S. median income.² The USPTO claims that this assumption is reasonable because individual inventors have “creative/technical abilities” above that of families at or below the median average income. (See RFA Certification Analysis, Ex. A, page 23, fn. 18; A.08295). There is, however, no data in the record which indicates or supports this proposition. Further, the suggestion that inventiveness and revenue are positively correlated is not proven.

(c) It is assumed that backlogged and pending applications should not be included as part of the USPTO’s analysis concerning how the new rules will impact small entities. (See RFA Certification Analysis, Ex. A, p. 13, section 3.2.2; A.08285). The economic impact on small entities, however, entails not only the applications that they will file, but also those applications that they have already filed -- since both pending and current applications are impacted by the new Rules. In other words, by excluding pending applications the USPTO’s analysis decreases the number of entities that will be impacted by the new Rules.

(d) The USPTO assumes that the legal service labor rate would be \$233 per hour and calculates this blended rate as a “composite of attorney and paralegal wage rates” which the USPTO cites as based on data from the AIPLA report entitled *Report of the Economic Survey 2005*. (See RFA Certification Analysis, p. 15, section 4; A.08287). Yet, the AIPLA report does not include hourly wage rates for paralegals, nor does it include the share of time on an IP legal matter spent by a paralegal and a lawyer. (See AIPLA Report, A.04113 to A.04329). Without this information, a blended rate cannot be accurately calculated.

(e) Additionally, the USPTO also does not indicate if the above referenced blended rate is weighted to reflect the distribution of patent filings across the United States. I understand from the USPTO’s own published data that the majority of patents that are granted are filed by residents of only a limited number of states. In fact, over 60% of US patents have historically been granted from only 10 states, indicating that patent filing is concentrated in those 10 states (See http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cst_all.htm) (attached hereto as Exhibit C). According to the AIPLA’s report, however, the metropolitan centers within these 10 states have hourly labor rates for IP legal work that are considerably higher than the national average. (See A.04305). This implies that an average hourly legal services rate that gives more weight to these 10 states would be considerably higher than the rate given in the USPTO’s analysis. By

² In 2006 the median household income was \$48,201. However, the median income per household member was \$26,036. Thus the USPTO implies that the revenues of all members of a household are counted as the revenues of the inventor.

using an un-weighted legal services rate, the USPTO is underestimating the total legal costs likely to be incurred complying with the new Rules.

(f) It is assumed that the estimates set forth at Schedule A of the RFA Certification Analysis accurately predict the unit costs associated with respect to patent prosecution tasks. The USPTO's costs estimates, however, misstate the information from the AIPLA report. For example, the RFA Certification Analysis states that "the cost of a patent search ranges from approximately \$1,000 for a relatively simple patent application up to approximately \$2,500 for a relatively complex patent application." (See RFA Certification Analysis, Ex. A, p. 15, section 4.1; A.08287). The data relied upon in the AIPLA Report, however, relates solely to the first quartile and third quartile charges by firms for "legal services only" in respect to a patentability opinion for a typical application. (See A.08287, A.04305). Thus, this does not represent the full "range" of legal costs, and ignores the upper end of the range, the relevant range applicable for applications having more than 5/25 claims. Further, it does not include search charges in the event the patent search is outsourced. The basis of the data, Question 39(o) "assume[es] a typical case with no unusual complications." The USPTO admits in its RFA Certification Analysis, (Ex. A, p.3. section 1.1; A.08275), that a patent application containing more than 5/25 claims is not a typical case. Furthermore, there is no indication that a "typical" patentability search mentioned in the AIPLA survey would meet the standard of the broad patentability search required under the USPTO's new ESD rules.

(g) The USPTO assumes "no costs [are] associated with the indistinct claims portion of the rules" – which requires an applicant to prove that indistinct claims do not exist between two (2) or more applications filed contemporaneously or one soon after the other. (See RFA Certification Analysis, Ex. A, p 19, section 4.3; A.08291). If an applicant chooses to dispute a USPTO charge of indistinct applications, there will be extra legal costs incurred by the applicant, which are not accounted for by the USPTO in its RFA Certification Analysis.

(h) The USPTO assumes as part of its RFA Certification Analysis that the preparation of an information disclosure statement in compliance with 37 C.F.R. §1.98 and the cost of defining the utility of an invention in each independent claim of an application will not vary regardless of the number of references that need to be reviewed and incorporated onto the information disclosure form. (See RFA Certification Analysis, Ex. A, p. 18, section 4.1; A.08290). I understand that the cost of such filing would increase with the number of references that need to be reviewed in contradiction to the USPTO's above referenced assumption.

(i) The USPTO assumes as part of its RFA Certification Analysis that one can equate each application with a separate or individual small entity filer. However, some small entity filers may file more than one (1) patent application per year (as is evidenced by Dr. Tafas). In fact, the USPTO concedes that counting applicants in this manner will “tend to understate impacts” but fails to correct its calculations to adjust for this downward bias. (See RFA Certification Analysis, Ex. A, p. 24, section 5.1.4; A.08296).

(j) The USPTO also assumes that an invention benefits from a patent’s protection for 20 years.³ Rather, I understand that a patent is often not awarded until two to four years after filing and that this delay shortens the 20 year term. In other words, the USPTO overstates the length of a patent’s protection.

9. In addition to making calculations based on assumptions that are not substantiated or supported in the administrative record, the USPTO has also omitted from its RFA Certification Analysis certain costs to small entities that will flow from enforcement of the new Rules. For example, the new Rules detailing the requirements for an Examination Search Document (ESD), state that any applicant who files more than five (5) independent claims or twenty-five (25) total claims in an application has to either file an ESD or, alternatively, decrease the number of claims. Either decision, however, has an economic cost associated with it. If an applicant chooses to file an ESD, they are faced with the patentability search costs, as well as related legal analysis costs. If they choose to remove claims, the applicant will be faced with the legal costs involved in determining which of among a number of claims to drop, and which claims to reintroduce in a subsequent application, if a subsequent application is still available (that is, if all of the applicant’s continuation applications have not been used up). The USPTO’s RFA

³ This claim is made several times throughout the report: (a) “In the case of patents ... it is reasonable to allocate the cost of obtaining a patent over the 20-year life of the resulting patent” (page 2, section 5.1.1, of the Certification Analysis); AR A08274; (b) “Over the 20-year lifespan of the patent” (page 4, section 5.1.1, of the Certification Analysis; AR A08276); and (c) “The incremental costs are annualized over a period of 20 years ... “to coincide with the life of the patent” (page 22, Section 5.1.2, of the Certification Analysis; A.08294).

Certification Analysis contains no data or analysis estimating the potentially substantial legal costs entailed in small entity patent applicant's going through the process of deciding which claims to remove nor does it account for the administrative and legal costs in filing the papers necessary to remove such claims.

10. The USPTO also does not take into account the filing, examination, and search costs involved in filing a first continuation, and possibly a second continuation application should one, instead of filing one application with more than five independent or twenty-five total claims, decide to split the application into multiple applications to avoid the 5/25 ESD requirement. I understand that these additional filing fees add to incremental costs incurred by applicants, because in the past a single patent filing may have sufficed to cover all of the claims made in an application. Under the new Rules, however, an applicant believing the need for six (6) independent claims for one (1) invention is required to undertake the costs of filing a continuation application, along with the attendant cost of a terminal disclaimer, to obtain the sixth claim. Under the preexisting patent rules, one (1) application would have sufficed. Additionally, under the new Rules an applicant will be forced to incur all prosecuting costs and legal fees associated with filing an additional application. Furthermore, the applicant would then be subject to paying additional maintenance fees on any patent that issued on the sixth claim.

11. The USPTO's RFA Certification Analysis has counted as affected by the new Rules limiting the number of claims only those applications that make more than fifteen (15) independent claims or more than seventy-five (75) total claims,⁴ rather than counting as affected

⁴ In another interpretation only applications with both claims in excess of 15/75 claims are counted, as the report alternates between the use of "and" and "or".

patent applications which contain more than 5 independent claims or more than 25 total claims. (See RFA Certification Analysis, Ex. A, p. 12 section 3.2.2; A.08284). Yet, the USPTO's new Rules require an applicant to file an ESD if an application contains more than 5 independent claims and/or more than 25 total claims. The USPTO justifies its choice of counting only 15/75 applications by arguing that that applicants with more than 5 independent claims or more than 25 total claims will avoid exceeding the 5/25 claims limitation by utilizing their two (2) continuations under the new Rules to make the additional claims about their invention. The USPTO's reasoning is not convincing for a number of reasons:

(a) There are patent applications awaiting first responses from the USPTO that that were filed before the publication of the new Rules. These applicants may have made more than 5 independent claims or more than 25 total claims in one application. Since the rules will be retroactively enforced for these applicants, they will be required to submit an ESD. Thus, these applicants will be adversely affected by the claims requirements and, therefore, should have been counted in an analysis of impact;

(b) Under the new Rules, applicants that use their first and second continuations to file claims so as not to file an ESD lose the chance to file a continuation application later (if they need to submit additional claims or they need to further respond to comments made by their patent examiner). The right to file additional continuations is of value to an applicant. The USPTO fails to quantify this opportunity cost. In short, all applicants with more than 5 independent claims or more than 25 total claims are adversely affected by the new Rules and should be counted.

12. Counting as affected the applications which contain more than 5 independent claims or more than 25 total claims increases the total number of entities affected as well as the percentage of entities affected, since only the number of affected entities and not the universe of entities increases. To calculate the number of small entities affected, I used a data set provided as part the administrative record.

13. The data I used is found in a May 15, 2007 email from Robert Bahr, representing the USPTO, to Elizabeth Gormsen of ICF, the USPTO provides a table containing the distribution of “initial applications” and total filings (all applications) by the number of total claims for large and small entities for 2006 (A.08255-A.08263). (A copy of this email and attachments is annexed hereto as Exhibit D). The column containing the distribution of **initial** small entity applications for Fiscal Year 2006 sums to 79,050, which the USPTO’s RFA Certification analysis lists as the total number of initial applications filed by small entities. (See RFA Certification Analysis, Ex. A, p. 14 section 3.2.2; A.0286). This provides confirmation that this dataset was used to make the calculations concerning the number of entities affected by the new Rules as determined in the USPTO’s RFA Certification Analysis.

14. Using this data set, I summed the entries in the small entity initial applications column with more than 25 total claims to find that 17,245 small entity initial applications would have been affected only by the claims requirements of the rules in 2006, if the rules had been in effect. The percentage of initial applications by small entities that would have been affected, assuming for argument’s sake that the new claims Rules been in effect in 2006, increases to 22% (17,245 divided by 79,050). Since this sum did not include applications with more than 5 independent claims, the total undercounts the amount and the percentage of initial applications by small entities that are affected by the claims requirements.⁵ I was not able to

⁵ I find that the total number of applications that have more than 75 claims is 1,026 applications. I was not able to replicate the assertion in the USPTO’s RFA Certification Analysis, Ex. A, p.12 section 3.2.2, A.08284 that there are 780 applications claiming small entity status having more than 15 independent claims and/or more than 75 total claims. Since this count did not include applications with more than 15 independent claims, the total provided by the USPTO undercounts the amount of initial applications made by small entities that are affected by the claims requirements.

calculate the number of applicants who would have been effected by the claims requirements and who also filed second or subsequent continuation or continuation-in-part applications, because comparable data containing this information was not provided as part of the administrative record, or at least was not identified by the USPTO.

15. In addition, the USPTO's RFA Certification Analysis does not clearly identify whether it has incorporated a key factor, *i.e.*, the costs entailed in reading and assimilating numerous documents that may be identified via a search. I understand that such costs could likely be substantial, given that each element of a claim will need to be searched, and therefore, many references likely to be uncovered. Document lengths could run from a few pages to potentially hundreds of pages. Since there is no data provided reflecting an analysis of these costs in the administrative record, a significant expense that applicants subject to the ESD requirement must incur has been omitted.

16. As noted above, the USPTO's calculations of the economic costs likely to be imposed as a result of the new Rules lack support; fail to include several key factors; and, include data which has been incorrectly assembled or incorrectly counted. However, even assuming for the sake of argument that the USPTO's calculations of incremental costs resulting from the new Rules were deemed to be accurate, the USPTO's RFA Certification Analysis still implies that small entities will be adversely affected.

17. In my analysis, I deemed the correct measure of yearly compliance expenditures flowing from the new Rules to be incremental costs as a percent of revenues (as opposed to annualized incremental cost as a percent of revenues, the measure used by the USPTO) for the following reasons:

(a) the RFA Certification Analysis explains that incremental cost is a “useful screening measure ... applicable to most types of entities” (See RFA Certification Analysis, p. 21, section 5.1.1; A.08293);

(b) the RFA Certification Analysis acknowledges that such a measure is as “common [a] screening measure for evaluating whether costs are significant,” as “Incremental Cost as a Percent of Revenue,” used by the USPTO (See RFA Certification Analysis, p. 21, section 5.1.1, A.08293);

(c) given my experience, it is implausible that all patent applicants, in particularly all small entity applicants, and in particular individual inventors, would be able to secure a loan as required under the USPTO’s Annualized Incremental Cost as a Percent of Revenue measure, regardless of the quality of their invention or their applications;

(d) in standard economic models, rational agents weigh costs that they incur against their ability to pay for those costs at the time of their decision, not as the USPTO has done, amortizing these same costs over a period of years;

(e) in standard economic models, a rational agent in standard economic models is assumed to calculate the present value of an effect, in this case the total incremental costs, rather than the payment to a loan for those costs.⁶ The actor then weighs those costs against the present value of the agent’s finances.

18. My analysis indicates that the new rules impose a significant impact on small businesses with \$75,000 in revenue, the USPTO’s assumed minimum possible level of revenues of a patent applicant, and for those entities with higher revenues as well.

⁶ Because the interest rate stays constant over the duration of the loan, the present value of the loan at the time of the application also stays constant, regardless if the length of the loan is 15, 18, 20, or even 100 years. Amortizing is an obfuscation which, in this case, amounts to junk economics

19. The incremental costs of the new Rules as calculated by the USPTO are listed at page 25, column two of 5-1 of the USPTO's RFA Certification Analysis, Ex A, A.08297. Using these incremental costs, I calculate which entities, by revenue level, will be impacted by the new Rules. This is done by dividing the incremental costs by 3%, which is the percentage of annual revenue which the USPTO defines as a "significant impact." These values are shown in the table below.

	<i>Revenue Range of Entities Affected at the 3% revenue threshold by The New Rule Requirements</i>	
New Rule Requirement	<i>5 Independent and/or 25 Total Claims</i>	<i>50 Independent and/or 350 Total Claims</i>
Continued Examination Filing Requirements Only	\$0 - \$29,066.67	\$0 - \$29,066.67
Claims Requirements Only, For Applicants That Already Conduct a Patent Search	\$0 - \$85,433.33	\$0 - \$337,866.67
Claims Requirements Only, For Applicants That Do Not Already Conduct a Patent Search	\$0 - \$172,333.33	\$0 - \$437,366.67
Both, For Applicants That Already Conduct a Patent Search	\$0 - \$114,500.00	\$0 - \$366,900.00
Both, For Applicants That Do Not Already Conduct a Patent Search	\$0 - \$201,400.00	\$0 - \$466,433.33

20. As is reflected in the table above, the new Rules will “significantly” (as that term is defined by the USPTO) impact entities with revenues well above \$75,000. For example, the table shows, that even using the USPTO’s criteria for significant impact on a substantial number of small entities, that small entities with revenues up to \$466,000 will be significantly impacted by the new Rules using the USPTO’s numbers.

21. Because the USPTO does not collect data on the revenues of patent applicants, there is no support for the USPTO’s estimates identifying the “number of percent of entity filings exceeding the threshold for annualized incremental cost as a percent of total revenue.” (See RFA Certification Analysis, p. 27, section 5.2.3; A.08299). This data gap also precludes me from calculating the number of entities who will be significantly affected by the new Rules using standard economic methodologies. While collection of this data may be impractically expensive to undertake, without information on the incomes of patent applicants, a concrete estimate of the number of applicants affected cannot be calculated. Thus, the USPTO should not rely upon projected revenues of patent filers as a key basis for its RFA Certification Analysis.

22. Notwithstanding this data gap, I am still able to show that the new Rules will have a disproportionate and adverse impact on small entities. The USPTO’s RFA Certification Analysis concedes that the incremental costs which applicants will incur to comply with the new regulations vary mainly based on the amount of claims made in an application, not based on the amount of revenue earned by the applicant. (See RFA Certification Analysis, Ex. A, p.17 to p.18, section 4.1, A.08289 to A.08290). Since large entity applicants have more resources, they are better able to bare the costs of the new Rules, holding the amount of

continuations applied for and the amount of claims made constant. Therefore, the new Rules will impact smaller entities, which by definition have fewer resources, disproportionately.

23. Even taking the USPTO's count of the number of entities affected by the rules as accurate, for the sake of argument, this disproportionate effect can also be shown through a simple comparison of the two values in the USPTO's RFA Certification Analysis for "Percent Affected" in Exhibit 3-2, (See RFA Certification Analysis, p. 14, Exhibit 3-2, AR A08286). For example, the percent affected by the continued examination filing requirement falls from 2.7% for the universe of small entities to 2.5% for all filers, while the percent affected by "Both" requirements falls from 0.3% to 0.2%, when all entities' applications are considered.

24. However, this simple comparison masks the magnitude of the disproportionate impact. If one takes out the small entities, and calculates the "Percent Affected" for all other non-small entities, as I have done in Table 5 below (which is based on Exhibit 3-2 on page 14 of the RFA Certification Analysis, Ex. A, A.08286), the contrast between impacts on small entities and "large" entities is more stark. The last column shows the relative impact between the two groups by calculating the ratio of the percent of small entities affected to the percent of large entities affected. For the two rules in isolation, small entities are about 138 percent more impacted by the claims rule and about 149 percent more likely to be impacted by the continued examination rule. For the small subset of individual applications affected by both rules, the smaller entities are 199 percent more impacted than large entities.

	Small Entity Data Set			All Entity Data Set			Data Without Small Entities		
	Total in Universe	Number Affected	Percent Affected	Total in Universe	Number Affected	Percent Affected	Number Affected	Percent Affected	Relative Impact on Small Entities*
Only Claims Req't	79,050	780	1.0%	285,324	2,818	1.0%	2,038	0.7%	138%
Only Continued Exam. Filing Req'ts	111,178	2,995	2.7%	408,396	10,402	2.5%	7,407	1.8%	149%
Both	111,178	325	0.3%	408,396	924	0.2%	599	0.1%	199%

* The Relative Impact is derived by dividing the % of small entities affected by the % of "large entities" affected.

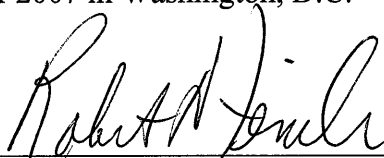
25. Even if we assume that the estimates of the impacts of the new regulations provided by the flawed USPTO RFA Certification Analysis report are correct, small entities are still significantly and disproportionately impacted

26. In summary: (1) the conclusions of the USPTO RFA Certification Analysis depend on data and assumptions that have no support in the administrative record; (2) the USPTO RFA Certification Analysis does not take into account many costs entailed in filing an Examination Support Document; (3) the USPTO RFA Certification Analysis includes data that has been incorrectly counted and improperly assembled; (4) even if one adopts all figures adopted by the USPTO in its analysis, standard economic models that calculate the effect of the Rules indicate that a substantial number of small entities will be significantly economically impacted by the new rules even with respect to the USPTO's standards for such a finding; and (5) appropriate analysis indicates that small entities will be significantly, disproportionately affected by the new rules in comparison with large entities.

VERIFICATION

Except as stated to be on information and belief, the undersigned hereby verifies and declares under penalty of perjury pursuant to 28 U.S.C. § 1746 that the foregoing statements are based on my personal knowledge and true and correct to the best of my knowledge, information and belief.

Executed this 19th day of December 2007 in Washington, D.C.

A handwritten signature in black ink, appearing to read "Robert N. Fenli", written over a horizontal line.

Robert N. Fenli, Ph.D.