

EXHIBIT L

Part 3 of 3

5.2.1 Cost Results

This analysis estimates that incremental costs will range from \$872 to \$13,993.¹⁹ Incurring the lowest of these incremental costs are those applicants affected only by the continued examination filing requirements. Applicants incurring incremental costs at the highest end of the range are those having the following three characteristics: (1) they are affected by the claims requirements and have the greatest number of claims (e.g., 350 total claims); (2) they did not choose to conduct a patent search in the baseline; and (3) they also are affected by the continued examination filing requirements. Most applicants will fall between the extremes, as they will be affected by the claims requirements but will have more typical (lower) numbers of claims. Exhibit 5-1 summarizes the cost results, which are discussed in greater detail in Section 4.

Exhibit 5-1
Summary of Incremental Costs and Annualized Incremental Costs

	Incremental Cost	Annualized Incremental Cost
Continued Examination Filing Requirements Only	\$872	\$82
Claims Requirements Only, for applicants that already conduct a patent search in the baseline	\$2,563-\$10,136*	\$242-\$957*
Claims Requirements Only, for applicants that do not conduct a patent search in the baseline	\$5,170-\$13,121*	\$488-\$1,239*
Both, for applicants that already conduct a patent search in the baseline	\$3,435-\$11,007*	\$324-\$1,039*
Both, for applicants that do not conduct a patent search in the baseline	\$6,042-\$13,993*	\$570-\$1,321*

* Cost of preparing an Examination Support Document varies depending on the number of claims in the application. Range shown covers up to 50 independent claims or 350 total claims. The analysis does not assume a range of costs per application, but instead applies the specific cost appropriate to the number of claims in each application.

5.2.2 Number Affected by the Rule

Exhibit 5-2 summarizes the total number of filings that will incur any incremental cost due to the claims requirements, the continued examination filing requirements, or both. In each case, the number is less than two percent of filings. Looking at the rule as a whole, only approximately 3.69 percent of small entity filings are expected to incur any impacts under the final rule. Under the sensitivity analysis, in which all entities would be considered small entities, this percentage falls to approximately 3.46 percent.

¹⁹ Current patent filing and maintenance costs for applications that would be affected by the final rule are estimated at between \$19,940 and \$49,155.

Exhibit 5-2
Number and Percent of Entity Filings Affected by Final Rule Requirements

	Small Entities		All Entities*	
	Number	Percent	Number	Percent
Continued Examination Filing Requirements Only	2,995	2.69% (of small entity filings)	10,402	2.55% (of all filings)
Claims Requirements Only, for applicants that already conduct a patent search in the baseline	429	0.54% (of small entity initial applications)	1,550	0.54% (of all initial applications)
Claims Requirements Only, for applicants that do not conduct a patent search in the baseline	351	0.44% (of small entity initial applications)	1,268	0.44% (of all initial applications)
Both, for applicants that already conduct a patent search in the baseline	179	0.16% (of small entity filings)	508	0.12% (of all filings)
Both, for applicants that do not conduct a patent search in the baseline	146	0.13% (of small entity filings)	416	0.10% (of all filings)
Total for Final Rule**	4,100	3.69% (of small entity filings)	14,144	3.46% (of all filings)

*Some stakeholder have stated that the USPTO's PALM system understates the number of small entities submitting patent filings. Therefore, as described in Section 3.2, this study evaluates the bounding case of *All Entities* as a sensitivity analysis.

** Percentages may not add due to rounding.

5.2.3 Magnitude of Impacts

Of the 3.69 percent of small entity filings that will incur any impacts under the final rule, very few – an estimated 54, or less than 0.05 percent – may exceed the minimal screening threshold of one percent, as shown in Exhibit 5-3. Moreover, no small entities applicants are expected to incur impacts at the more significant threshold of three percent, as shown in Exhibit 5-4. Under the sensitivity analysis, in which all entities would be considered small entities, an estimated 157 entities, or about 0.04 percent, may exceed the one percent threshold, and none would exceed the three percent threshold.

Exhibit 5-3

Number and Percent of Entity Filings Exceeding the 1 Percent Threshold for Annualized Incremental Cost as a Percent of Total Revenue

	Small Entities		All Entities*	
	Number	Percent	Number	Percent
Continued Examination Filing Requirements Only	0	0% (of all filings)	0	0% (of all filings)
Claims Requirements Only, for applicants that already conduct a patent search in the baseline	9	0.01% (of all initial applications)	24	0.01% (of all initial applications)
Claims Requirements Only, for applicants that do not conduct a patent search in the baseline	23	0.02% (of all initial applications)	76	0.02% (of all initial applications)
Both, for applicants that already conduct a patent search in the baseline	3	0.00% (of all filings)	7	0.00% (of all filings)
Both, for applicants that do not conduct a patent search in the baseline	19	0.02% (of all filings)	50	0.01% (of all filings)
Total for Final Rule **	54	0.05% (of all filings)	157	0.04% (of all filings)

*Some stakeholder have stated that the USPTO's PALM system understates the number of small entities submitting patent filings. Therefore, as described in Section 3.2, this study evaluates the bounding case of *All Entities* as a sensitivity analysis.

**Totals may not add due to rounding.

Exhibit 5-4

Number and Percent of Entity Filings Exceeding the 3 Percent Threshold for Annualized Incremental Cost as a Percent of Total Revenue

	Small Entities		All Entities*	
	Number	Percent	Number	Percent
Continued Examination Filing Requirements	0	0%	0	0%
Claims Requirements, for applicants that already conduct a patent search in the baseline	0	0%	0	0%
Claims Requirements, for applicants that do not conduct a patent search in the baseline	0	0%	0	0%
Both, for applicants that already conduct a patent search in the baseline	0	0%	0	0%
Both, for applicants that do not conduct a patent search in the baseline	0	0%	0	0%
Total for Final Rule**	0	0%	0	0%

*Some stakeholder have stated that the USPTO's PALM system understates the number of small entities submitting patent filings. Therefore, as described in Section 3.2, this study evaluates the bounding case of *All Entities* as a sensitivity analysis.

5.2.4 Unquantified Benefits

Partially offsetting the minor impacts of the rulemaking are certain unquantified benefits. The most significant benefit that will accrue to affected small entities seeking patents (and to larger patent applicants) will be the reduction in time required to complete the patent process. As described in Section 1.3, a reduction in processing time is one of the USPTO's key objectives for the rule. A second benefit that will accrue to small entities seeking patents (along with larger patent applicants) may be a reduction in patent fees relative to what those fees might rise to in the absence of the rule. By allowing patent examiners to more efficiently complete their examination of the most time-consuming patents, the rule should reduce the growth in the fee-recoverable cost base. Finally, PTO also expects the rule to contribute to higher-quality patents in many cases. This benefit accrues to society as a whole (including small entities) and might result in various efficiencies as well as a decrease in patent litigation.

5.3 Conclusion

This analysis estimates that the final rule will result in incremental costs that range from \$872 to \$13,993 per application (present value).²⁰ Based on the methodology and data described in this report, the resulting analysis indicates that no patent applicants will incur significant impacts (defined as annualized incremental costs in excess of three percent of revenue) due to the final rule. Although some applicants will exceed the lower screening threshold of one percent, the number of small entities in this category is estimated at only 54, or about 0.05 percent of all small entity applicants. Even using data for all applicants as a sensitivity analysis, only 157 small entity applicants fall into this category – 0.04 percent of all applicants. These figures do not meet the criterion for a “substantial number” of small entities. Therefore, this analysis concludes that USPTO's final rule will not result in significant economic impacts on a substantial number of small entities.

6. Duplicative, Overlapping, and Conflicting Rules

The USPTO is the sole U.S. government agency responsible for administering the patent system and granting patents. Therefore, no other federal, state, or local entity shares jurisdiction over the United States' patent system.

Other countries, however, have their own patent laws, and an entity desiring a patent in a particular country must make an application for patent in that country, in accordance with the applicable law. Although the potential for overlap exists internationally, this cannot be avoided except by treaty (such as the Paris Convention for the Protection of Industrial Property, or the Patent Cooperation Treaty (PCT)).

²⁰ Current patent filing and maintenance costs are estimated at between \$19,940 and \$49,155 for filings that would be affected by the final rule.

Nevertheless, the USPTO believes that there are no other duplicative or overlapping rules. Some public comments submitted in response to the notices of proposed rulemaking argued that the proposed rules conflict with provisions of the Paris Convention and/or the PCT. The final rulemaking explains why there are no conflicts with either the Paris Convention or the PCT.

7. Significant Alternatives Considered and Steps Taken to Minimize Impacts on Small Entities

In response to some of the comments received, USPTO considered a variety of alternatives to minimize the impacts on small entities. Section 7.1 describes the alternatives that were adopted as part of the final rule. Section 7.2 discusses other alternatives that were considered but not adopted.

7.1 Alternatives Adopted by USPTO

The USPTO implemented five alternatives in the final rule to minimize the impact on small entities. The first two alternatives relate to the claims requirements and the remaining three relate to the continued examination filing requirements. In the final rule, the USPTO changed the ESD requirement threshold from more than ten representative claims in an application (proposed rule) to more than five independent claims or more than 25 total claims in an application (final rule). This change reduces the number of small entities affected by the final rule.

In addition, under the final rule, the USPTO will not require small entities, as defined in 13 CFR 121.802, to include in their ESDs one of the elements that would have been required under the proposed claims rule. Specifically, the final rule will not require small entities (but will require large entities) to identify, for each reference cited, all the limitations of each of the claims (whether independent or dependent) that are disclosed by the references. The USPTO considers this element of the ESD to be the most challenging for patent applicants. As a result of this change, the costs associated with the final rule will be greatly reduced for small entities.

The third alternative adopted in the final rule changes the continued examination filing petition threshold from one continuation application, continuation-in-part application, or RCE (proposed rule) to two continuing applications (continuation or continuation-in-part applications), and no more than a single RCE in any one of the initial or two continuing applications (final rule). This change also reduces the number of small entities affected by the final rule.

As mentioned in Section 3.2.2, some comments requested that applicants continue to be permitted to file divisional applications serially (i.e., in the manner of continuations or continuation-in-parts), rather than in parallel (i.e., by submitting multiple related applications simultaneously), in order to spread out the associated cost burden over time.

In response, the final rule modifies the time period within which any divisional application must be filed. An applicant may currently and under the final rule file a divisional application to each non-elected invention if the USPTO issues a requirement that an application containing claims to multiple inventions be restricted to a single invention (a restriction requirement). The USPTO changed the divisional filing period requirement from during pendency of initial application (proposed rule) to during the pendency of the initial application or its two continuing applications (final rule). As a result, the costs incurred by affected entities will be spread over a longer time period, which will ease the cost burden on these entities.

The final alternative the USPTO implemented in the final rule changes the application of the continued examination filing provisions from any continued examination filing (any continuation, continuation-in-part, or RCE) filed on or after the effective date (proposed rule) to at least "one more" continuation or continuation-in-part application after the effective date, regardless of the number of previous continued examination filings (final rule).

7.2 Alternatives Considered But Not Adopted

The USPTO considered changing the proposed claims requirements to instead provide expedited examination to applications containing less than a set number of claims. The USPTO currently has an accelerated examination program for applicants who limit the number of claims in their applications (to no more than three independent claims and no more than twenty total claims) and who also provide an ESD. Therefore, the USPTO did not pursue this alternative in the final rule.

In addition, the USPTO considered another alternative to the proposed claims requirements. To minimize the impact on small entities, the USPTO considered not applying the ESD requirement to pending applications that have not yet been examined (the backfile). However, the final rule's ESD applicability threshold (i.e., applications having more than five independent claims or more than twenty-five total claims) means that most small entity applicants will not be impacted by the final rule or the decision to apply the final rule to the backfile. Given the current backlog of over 700,000 unexamined applications, a decision to not apply the changes to the backfile would mean that it would be calendar year 2010 before the USPTO would see any benefit from the change, and that the USPTO (and applicants) would be in a transition state until late calendar year 2011.

The USPTO also considered a change that affected both the claims and continued examination filing requirements. The alternative would have imposed additional fees for continued examination filings and/or a graduated excess claims fee schedule. Currently, patent application and excess claims fees are set by statute (35 U.S.C. 41(a)). In 2002, the USPTO proposed a patent fee structure that included a graduated excess claims fees schedule and additional fees for continued examination filings. The USPTO was unable to garner sufficient support from patent user groups for a patent fee structure including a

graduated excess claims fees schedule or any additional fees for continued examination filings. Therefore, the USPTO did not adopt the alternative.

The final alternative the USPTO considered but did not adopt addressed the continued examination filing requirements. The change would have expanded the deferral of examination provisions to allow a longer deferral of examination. The USPTO currently has a provision (37 CFR 1.103(d)) under which an applicant may request deferral of examination for up to three years from the earliest filing date for which a benefit is claimed. The USPTO continues to study whether changes (e.g., an increased deferral period, third party request for examination, and patent term adjustment) to the deferral of examination procedure would be appropriate, but notes that patent user groups have historically not favored increases in the deferral of examination. Therefore, the final rule does not contain this alternative.

Appendix A: Input Cost Estimates

Cost elements	Estimate	Description/Source
Patentability search - Simple	\$1,000	AIPLA Report 2005, Table Q39o, 25th percentile, All Individuals
Patentability search - Complex	\$2,500	AIPLA Report 2005, Table Q39o, 75th percentile, All Individuals
Applicant's time, prepare and attend client interview - Simple	\$450	3 hours @ \$150 (range from 3-21 hours)
Applicant's time, prepare and attend client interview - Complex	\$2,400	16 hours @ \$150 (range from 3-21 hours)
Attorney's fee for patent application - Simple	\$7,000	AIPLA Report 2005, Table Q39e, 25th percentile, All Individuals
Attorney's fee for patent application - Complex	\$15,000	AIPLA Report 2005, Table Q39c, 75th percentile, All Individuals
Application Filing Fee (Initial/Cont/CIP) (USPTO)	\$600	USPTO FY2006 Fees
Excess independent claims fee (USPTO)**	\$1,300	USPTO FY2006 Fees
Excess total claims fee (USPTO)**	\$1,400	USPTO FY2006 Fees
Response to First Office Action - Simple	\$1,000	AIPLA Report 2005, Table Q39f, 25th percentile, All Individuals
Response to First Office Action - Complex	\$4,500	AIPLA Report 2005, Table Q39g, 75th percentile, All Individuals
Prepare CIP application, lawyer's fees	\$3,500	USPTO staff estimate, September 12, 2006
Response to Final Office Action - Simple	\$1,000	AIPLA Report 2005, Table Q39f, 25th percentile, All Individuals
Response to Final Office Action - Complex	\$4,500	AIPLA Report 2005, Table Q39g, 75th percentile, All Individuals
Issue Fee (USPTO)	\$700	USPTO FY2006 Fees
Lawyer fee to pay an Issue Fee - Simple	\$350	AIPLA Report 2005, Table Q39i, 25th percentile, All Individuals
Lawyer fee to pay an issue Fee - Complex	\$1,000	AIPLA Report 2005, Table Q39i, 75th percentile, All Individuals
First Maintenance Fee (USPTO)	\$450	USPTO FY2006 Fees
Second Maintenance Fee (USPTO)	\$1,150	USPTO FY2006 Fees
Third Maintenance Fee (USPTO)	\$1,900	USPTO FY2006 Fees
Lawyer fee to pay Maintenance Fees - Simple	\$150	AIPLA Report 2005, Table Q39n, 25th percentile, All Individuals
Lawyer fee to pay Maintenance Fees - Complex	\$300	AIPLA Report 2005, Table Q39n, 75th percentile, All Individuals
RCE Fee (USPTO)	\$395	USPTO FY2006 Fees
Petition Fee	\$400	USPTO FY2006 Fees
Petition Preparation	\$1,000	USPTO staff estimate, September 11, 2006

**Estimates of incremental costs are calculated based on the number of claims contained in each application. Estimated baseline costs, however, conservatively assume the application has 76 total claims and 16 independent claims, and therefore may understate the baseline costs.

Appendix B: Estimating the Value of Patent Applications

One way to measure the incremental cost of the proposed rule is to express the cost as a percentage of the expected value derived from the patent over its lifetime. Economists have been studying the expected lifetime market value of patents in order to measure the impact of technological innovation on the macro-economy. For reasons discussed below, however, estimates of patent value show significant variation among various studies and approaches.

One measure of the expected value is derived from estimating the total income from patented ideas. Eaton and Kortum (1995) estimated the value of all patented ideas in the U.S. to be about \$197 billion in 1998. According to USPTO data, there were 84,272 patents granted in 1988 in the U.S. whereas the total number of patent applications in that year was 151,491. Thus, based on the income earned from patented ideas, the average value of a patent in 1988 was about \$2.3 million per patent granted, and about \$1.3 million per patent application.

Because of the hazard of imitation in some of the developing countries, economists estimating the worldwide value for patents (as opposed to in the domestic country only) find the average expected value to be significantly lower. For example, McCalman (2005) analyzed the worldwide value of patent applications filed by U.S. inventors in the same year as above, and estimated it to be about \$163,700 per application in 1988.

Perhaps the most realistic measure of the market value of patents is provided by Hall, et al (2000). They matched USPTO's patent database to publicly traded firm-level data from Compustat to estimate the market value of patents. Using data from 1976 – 1992, they found the marginal shadow value of a patent to be \$370,000. Drawing on USPTO data for this period, the ratio of patents granted to total applications was 59 percent. Therefore, the marginal shadow value of patent per application in this period was about \$220,000.

This discussion illustrates the wide variation in the economics literature on lifetime patent values. One reason for such differences is whether the value of the patent is estimated for the U.S. only or for values accruing to patents around the world. Moreover, as Griliches, Hall, and Pakes (1987) point out, the distribution of the patent values is known to be extremely skewed with a few patents being very valuable, and many worth almost nothing. Any exercise in estimating the future value of patents or patent applications is, therefore, fraught with uncertainty and likely to produce extremely noisy measures.

References:

Eaton, J, S. Kortum. 1995. "Trade in Ideas: Patenting and Productivity in the OECD." National Bureau of Economic Research Working Paper Series, No. 5049.

Griliches, Z, A. Pakes, and B. Hall. 1987. "The Value of Patents as Indicators

of Inventive Activity," in Dasgupta, Partha, and Paul Stoneman (eds.), *Economic Policy and Technological Performance*. Cambridge, England: Cambridge University Press, 97-124.

Hall, B, A Jaffe, M Trajtenberg. 2000. "Market Value and Patent Citations: A First Look." Institute of Business and Economic Research, University of California, Berkeley. Working Paper E00'277.

McCalman, P. 2005. "Who Enjoys 'TRIPS' Abroad? An Empirical Analysis of Intellectual Property Rights in the Uruguay Round." *Canadian Journal of Economics*: 574-603.