

**Patent Office  
Professional  
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**STATEMENT OF  
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Submitted to the

**SUBCOMMITTEE ON COURTS, THE INTERNET  
AND INTELLECTUAL PROPERTY  
COMMITTEE ON THE JUDICIARY  
U.S. HOUSE OF REPRESENTATIVES**

On The Subject Of

**“Oversight Hearing On The U.S. Patent and Trademark Office”**

**February 27, 2008**

Mr. Chairman, Ranking Member Coble, Members of the Subcommittee,

Thank you very much for this opportunity to present the views of the Patent Office Professional Association (POPA) on the operations of the U.S. Patent and Trademark Office (USPTO).

POPA represents more than 5,800 patent professionals at the USPTO. The vast majority of these are the agency's patent examiners – the engineers, scientists and attorneys who determine the patentability of the hundreds of thousands of patent applications received in the USPTO each year. POPA's members are diligent, highly skilled, hard working professionals. They take great pride in the work they do and are committed to maintaining the quality and integrity of America's patent system.

The U.S. patent system is a powerful engine driving innovation in America. It has helped produce the most powerful and robust economy in history. The vital role of patents to the U.S. and global economies is clearly evidenced by the rapidly expanding efforts of inventors and companies to protect intellectual property throughout the world.

The USPTO has been the target of much criticism in recent years for failing to allow high-quality patents and doing so in a timely manner. This criticism has resulted in increased scrutiny of the day-to-day operations of the USPTO as well as review of the laws governing the patent system. A number of studies, both government and private, as well as at least one book have been published that attempt to identify problems facing the USPTO today while proposing a variety of solutions for those problems. Regardless of the source, virtually all studies agree that the USPTO needs to: hire and retain a highly skilled workforce; improve the quality and timeliness of issued patents; and keep and use all of its fees for its own operations.

POPA agrees that these are important issues facing the USPTO, but it does not necessarily agree with many of the solutions proposed by the authors of these studies.

POPA notes with appreciation that Congress and the Administration have worked together in permitting the USPTO to retain and use all of its fees since Fiscal Year 2005. This is a vital step towards fixing the perceived problems of the agency and POPA urges the Legislative and Executive branches to continue this cooperation in the future.

Many other proposed solutions, including the Patent Reform Act of 2007, are directed towards fixing problems with patent quality after a patent has issued. Many of these proposed changes represent radical changes to the U.S. patent system. POPA believes that they go far beyond what is truly necessary to improve performance at the USPTO.

In his cover letter accompanying the Patent Public Advisory Committee (PPAC) Annual Report to Congress and the President, PPAC Chairman Kevin Rivette stated:

The Committee believes that the United States patent system and the United States Patent and Trademark Office (“USPTO”) face significant challenges that urgently need to be addressed today. *The issues of patent quality and pendency override all other issues.*<sup>1</sup> [Emphasis added].

POPA agrees with the assessment of Chairman Rivette and the PPAC on the critical nature of patent quality and pendency. These issues, however, are internal problems of the USPTO.

POPA believes that quality and pendency must be solved in the USPTO before a patent is issued – not after. As with any product, it is better to build quality in right up front than to try and repair problems after the product is manufactured. Patent examiners understand this fundamental truth, but they need the time and the tools to do the job right the first time.

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<sup>1</sup> Attachment 1. Letter from PPAC Chair Kevin Rivette to The President accompanying PPAC FY07 Annual Report, November 30, 2007. A complete copy of the PPAC Annual Report can be obtained at: [www.uspto.gov/web/offices/com/advisory/reports/ppac\\_2007annualrpt.pdf](http://www.uspto.gov/web/offices/com/advisory/reports/ppac_2007annualrpt.pdf).

## DOING THE JOB RIGHT TAKES PEOPLE

If the U.S. patent system is to continue driving innovation and economic competitiveness in America and the world, the USPTO must issue high-quality patents that meet all the statutory requirements for patentability and it must do so in a timely manner. To accomplish this, the agency must hire highly skilled patent examiners and, most importantly, it must keep them. In its 2007 Annual Report, the PPAC stated:

Attracting and retaining the most qualified workforce possible is ultimately the key to a successful examination system. The most sophisticated search tools, and the clearest applications and standards are unavailing if the USPTO does not hire, train and retain talented, dedicated employees.<sup>2</sup>

Hiring and keeping good people has been a problem for the USPTO for many years. The Dept. of Commerce Inspector General (IG) issued a report in 2002 finding that the USPTO needed improvements in its hiring practices.<sup>3</sup> The IG identified several obstacles facing the USPTO: a shortage of potential examiners with appropriate technical training, private sector job competition, compensation packages less than private sector compensation, and competition from other Federal agencies.

A brief history of the agency's hiring and retention problems can be found in "*Innovation and Its Discontents*" by Adam B. Jaffe and Josh Lerner.<sup>4</sup> The authors noted that the increasing importance of intellectual property in a global economy made the problem of hiring and retention even more acute.

While patent application filings increased continuously, years of inadequate funding and restrictions on hiring (FTE ceilings) left the USPTO severely understaffed. Fortunately, since

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<sup>2</sup> PPAC Annual Report, November 30, 2007, page 6.

<sup>3</sup> "Patent Examiner Hiring Process Should Be Improved," U.S. Dept. of Commerce Office of Inspector General Final Inspection Report No. BTD-14432-2-0001, March 2002.

<sup>4</sup> Jaffe, A. B. & Lerner, J., *Innovation and Its Discontents*, Princeton University Press, 2004, pp. 133-138.

2005, the agency has been permitted to keep its fees and appropriators have lifted restrictions on hiring – actually requiring hiring minimums, rather than hiring maximums.

Over the last several years, the agency has dramatically increased its hiring efforts, bringing on approximately 1,000 to 1,200 new examiners in each of the last three years. Although this level of hiring has strained the agency's training resources, it demonstrates that the agency does not have a significant hiring problem. It is finding people to hire. The agency's problem is keeping the people it hires.

While the agency is working hard at hiring 1,200 new examiners per year, approximately 30 to 44 percent of those new examiners leave the agency within three years. To compensate for overall annual examiner attrition, the agency must hire almost two examiners for each one it retains. For example, in Fiscal Year 2005, the agency hired 978 examiners but had 425 examiner attritions. In FY 2006, the agency hired 1,218 examiners but lost 510. In FY 2007, it hired 1,215 but lost 543.

POPA has compiled a history of attrition from 1990 to 2005 using USPTO published statistics.<sup>5</sup> A review of this data shows that, while the majority of examiner attrition comes in the first three years of employment, a significant number of mid-career (3-15 years) examiners also leave the agency. Many of these examiners are experienced primary examiners who train junior examiners and perform at higher production levels. Because of this mid-career attrition, POPA does not believe the agency is expanding the pool of experienced examiners at a sufficient rate to meet its needs.

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<sup>5</sup> Attachment 2. "Attrition of Patent Examiners (including SPEs)," compiled by POPA from USPTO sources such as Annual Reports and public meetings of the Patent Public Advisory Committee.

Not until one looks out past 15 years of service in the agency does the attrition rate significantly drop off. This makes perfect sense when one realizes that these employees generally have significant investment in retirement plans and have truly made a career at the USPTO.

The USPTO's problems with retention have recently been investigated by the General Accountability Office (GAO).<sup>6</sup> In its September 2007 report to Congressman Tom Davis, Ranking Member of the House Committee on Oversight and Government Reform, the GAO found that:

From 2002 through 2006, patent examiner attrition has continued to significantly offset USPTO's hiring progress. Although USPTO is hiring as many new patent examiners as it has the annual capacity to supervise and train, for nearly every two patent examiners it has hired over the last 5 years at least one has left the agency. Specifically, USPTO hired 3,672 patent examiners between 2002 and 2006, and 1,643 patent examiners left the agency during this time. More importantly, of those who left, 70 percent had been at USPTO for less than 5 years. (Report at page 5).

The results of the GAO investigation correlate well with the attrition data independently compiled by POPA and highlights the need to improve retention of examiners, especially those with fewer than fifteen years in the agency.

In response to the GAO report, USPTO Director Jon Dudas sent a letter to Congressman Tom Davis, Ranking Member of the Committee on Oversight and Government Reform and the requestor of the GAO investigation.<sup>7</sup> In his letter, Mr. Dudas attempts to minimize the issue of attrition at the USPTO by comparing USPTO attrition to other government and private sector entities and by "analyzing and addressing patent-examiner attrition with several innovative

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<sup>6</sup> "Hiring Efforts Are Not Sufficient to Reduce the Patent Application Backlog," U.S. Government Accountability Office Report No. GAO-07-1102, September 2007.

<sup>7</sup> Attachment 3. Letter from Undersecretary of Commerce and USPTO Director Jon Dudas to the Honorable Tom Davis, Ranking Member, Committee on Oversight and Government Reform, December 4, 2007.

techniques since it began hiring in FY2005.” (See page 4). POPA does not know what “innovative techniques” Mr. Dudas is referring to, but the attrition statistics in his letter do not appear to correlate with previously published USPTO data. For example, the agency has tracked attrition of those hired in a particular fiscal year by length of service. The data that we have seen shows that the attrition of examiners from the same hiring group having less than three years of experience is in the range of approximately 30 to 44 percent of those hired. Mr. Dudas’ letter only attributes an average attrition rate of 15.5 percent to examiners with 0-3 years experience.

Furthermore, attempting to minimize the agency’s attrition problems by comparing the USPTO to other government agencies or private sector companies is misleading – the fact that other agencies or companies have attrition problems does not make the need for the USPTO to retain its examiners any less urgent. What is most important is that, from our experience, the USPTO could have a lower attrition rate if it treated employees differently.

Mr. Dudas also sets forth a number of initiatives the USPTO claims to be doing to retain examiners. Again, this information is misleading. POPA is unaware of any examiner receiving a “retention bonus.” The agency is paying recruitment bonuses to new hires, but has not offered any retention bonuses to its senior examiners who are every bit as essential to the agency. While the agency did obtain an increase in examiners’ special pay rate, that increase has already been eroded by locality pay increases in 2007 and 2008 for which special pay rates are not eligible. Part-time employment is not available to all employees. There are ceilings on the number of participants in our negotiated part-time programs. Award programs for patent examiners have not been changed in many years. Most insulting of all to examiners is the inclusion of the onerous “flat goal” pilot – a pilot POPA believes is illegal and so abhorrent to almost all

examiners that the agency could barely muster 180 or so volunteers for a 300-person pilot program.

A serious matter likely to negatively effect attrition in 2008 is examiners' concerns with the decidedly anti-employee attitude of USPTO management in negotiations on a new collective bargaining agreement. These negotiations have been ongoing for the better part of a year with little progress on major topics. It is clear from the agency's proposals and discussions that USPTO management intends to dramatically curtail important employee rights with respect to grievances and performance appraisals as well as rolling back benefits that employees have enjoyed for many years. The agency has even refused to commit to treating all examiners fairly and equitably, or provide senior examiners with their own offices – things the agency has been doing for many years. This is no way to run an agency that needs every examiner it can get.

When it comes to retention of examiners, the agency's anti-employee actions speak much louder than their words. And examiners are very intelligent people. They understand what management is really trying to do in these negotiations.

Finally, the one thing management could do to increase retention, it has consistently refused to do for more than thirty years – provide examiners with the time to do the job right. More than any other factor, the most common reason examiners leave the USPTO is the unrelenting stress caused by the agency's outdated production system.

## **DOING THE JOB RIGHT TAKES TIME**

Patent examination is a labor-intensive job, both mentally and physically. Automation can accelerate certain processes such as searching large databases of information, but it cannot make the examiner read and understand the results of those searches any faster. To do the job



right requires a serious investment, not only in resources such as automated search tools, but in real time for examiners to use those tools, examine applications and determine the patentability of inventions.

For many years now, management at the USPTO has sought ways to do the job faster and cheaper. They have spent well over a billion dollars on automated search tools – often resulting in tools that have not lived up to expectations.<sup>8</sup> They have reduced costs, not by developing better and more efficient processes, but by no longer funding important examination tools such as developing and maintaining the U.S. classification system and the agency’s paper search files. And, for more than thirty years the agency has refused to adjust examiners’ production goals to compensate for the increasing complexity of technologies, larger and more complex patent applications, and an ever-expanding body of both patent and non-patent literature (prior art).

Examiners manufacture patents. But, as with any manufacturing process, doing it faster and cheaper usually results in making a lower-quality product. Patent examining is not immune to this fundamental axiom. After years of trying to do the job faster and cheaper, the USPTO now finds itself facing the same criticism that any manufacturer faces when they cut corners – a perception by end-users that the product lacks the quality it needs to do the job it was supposed to do.

Examiners, as POPA has often stated, manufacture patents in the high-stress environment of a “legal sweatshop.” They do an arcane job under difficult and antiquated circumstances.

The USPTO monitors examiner performance using a rigorous goal-oriented production and workflow system that measures examiners’ work output (production) in 6-minute

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<sup>8</sup> “Key Processes for Managing Patent Automation Strategy Need Strengthening,” U.S. Government Accountability Office Report No. GAO-05-336, June 2005.

increments. Currently, a GS-12 examiner has, on average, about 20.4 hours, spread over one to two years, to complete the examination of a utility-type patent application. The agency has long recognized that technologies differ in complexity and that some examiners are more experienced than others. Primary examiners, those at GS grades 14 and 15 with authority to act independently, are expected to be much more productive than junior examiners requiring various levels of supervision. Under current production goals, some primary examiners in low complexity technologies have as little as 11.2 hours per application. Primary examiners in even the most complex technologies are only allowed a maximum of 22.1 hours.<sup>9</sup> Examiners working on design-type applications or plant applications have even less time than those working on utility-type applications. On average, these examiners have only about five to seven hours per application.

The USPTO's production goals have remained essentially unchanged since they were put in place in 1976. Since that time, however, the work of examiners has changed considerably. Examiners now routinely examine technologies such as biotechnology, nanotechnology, bioinformatics, and business methods that were either not patentable or simply did not exist when these goals were put in place. Cell phones, Blackberries™ and personal computers had not been invented.

Since 1976, patent applications have become more complex. Applications today often have larger specifications and higher numbers of claims than applications filed in 1976. Applicant-submitted information disclosure statements are sometimes so large that they require storage in boxes. The increased complexity of patent applications has been clearly demonstrated

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<sup>9</sup> "U.S. Patent and Trademark Office: Transforming to Meet the Challenges of the 21st Century," Report of the National Academy of Public Administration for the United States Patent and Trademark Office, August 2005, Appendix D, Table D-2.

recently in studies by Dennis Crouch, Law Professor at the University of Missouri and the author of the widely-read patent law blog “Patently-O.”<sup>10</sup> Professor Crouch’s data shows that the size of issued patent specifications (as determined by word count) has increased linearly with time since 1987. His data also shows that the number of both independent claims and total claims has grown significantly from 1975 to 2005. Professor Crouch notes that:

It is important to recognize that the above results are directed to issued claims. In most cases, patent applications originally include even more claims that are then cancelled during the examination process.

This data confirms POPA’s position that the amount of work examiners must do during examination has increased significantly since the agency put in place its performance goals in 1976. The increased complexity of patent applications has also been recognized by both the USPTO and Congress as evidenced by significant increases in fees for large specifications and excess claims.

Every bit as problematic as increasingly complex patent applications, is the massive increase of information that examiners must search to identify relevant prior art. It took the USPTO two hundred years to issue Patent No. 5,000,000 on March 19, 1991. In the seventeen years since, the agency has issued over 2.3 million more. The USPTO issues several thousand patents every week. Foreign patent literature is growing at a similar rate. But the growth of patent literature is dwarfed by the rapidly expanding amount of non-patent literature – scientific and technical journals, trade magazines, catalogs, Internet web pages, etc. – that examiners search to determine patentability of an invention.

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<sup>10</sup> Attachment 4. “The Rising Size and Complexity of the Patent Document,” Dennis Crouch, February 20, 2008; Data on increased specifications originally published on “Patently-O” blog, December 20, 2007; Data on increased numbers of claims originally published on “Patently-O” blog, December 23, 2007

Trying to do high quality examination of patent applications in 2008 in the amount of time examiners were given in 1976 has left examiners angry, stressed-out and demoralized. This has been made clear in examiner surveys carried out by both POPA and the GAO.

In response to the agency's proposal for a flat goal performance appraisal pilot, POPA undertook a survey of examiners in May 2006 to ascertain their views and concerns on the proposed flat goal performance plan.<sup>11</sup> POPA's data revealed that one third of examiners work unpaid overtime just to keep their jobs! Another third of examiners work unpaid overtime to earn performance awards. This excessive use of unpaid overtime establishes the need for the USPTO to provide more time to examiners so they can do the job right the first time.

POPA's survey results were independently confirmed by the GAO in its September 2007 report. In a large-scale random survey of examiners, the GAO found that two thirds of examiners identified the USPTO's production goals as a primary reason for leaving the agency. The GAO also found that 70 percent of examiners worked substantial unpaid overtime to meet their production goals. The study found that 42 percent of examiners worked while on annual leave in order to make their goals. They also found that "the percentage of patent examiners who worked unpaid overtime increased with the length of tenure they had with the agency."<sup>12</sup>

Consistent with the agency's inaction of the last thirty years, the GAO found that "This extensive amount of unpaid overtime does not appear to be a concern to USPTO management, even though the agency has not been able to meet its productivity goals for the last 4 years."<sup>13</sup>

In his December 4, 2007 letter to Congressman Davis in response to the GAO report, Director Dudas claimed that higher production requirements do not translate to higher attrition

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<sup>11</sup> Attachment 5. "Results of POPA Survey On Flat Goal Pilot Program," May 2006.

<sup>12</sup> GAO Report No. GAO-07-1102, September 2007, pages 18-19.

<sup>13</sup> *Ibid.*, at page 19.

and that nearly all examiners exceed production requirements. POPA believes Mr. Dudas' conclusions are misleading.<sup>14</sup>

In his analysis, Mr. Dudas has divided the examining corps into only two groups – those in the Office under three years (<3 years) and those in the Office three or more years (≥3 years). This statistical analysis skews the results of the ≥3 year group. It attempts to hide the higher attrition rates in the ≥3 to <15 year group (as shown in POPA's Attachment 2) by diluting the statistic with the production of the more stable >15 year group. Those in the >15 year group represent the USPTO's most experienced examiners, the vast majority of them being primary examiners. One would naturally expect them to be more productive and, indeed, the agency's production system takes that experience into account in setting examiner goals.

USPTO data provided to POPA in negotiations indicates that only 55 percent of examiners received any kind of monetary award in FY 2006 (the most recent data available). Thus, 45% of examiners received no bonus at all for their work. In the same period, more than 80% of USPTO's patent managers received from \$7,500 to \$15,000 cash awards, a fact not lost on examiners as they work their unpaid overtime.

Mr. Dudas' conclusions completely ignore the fundamental underlying truth of the "sweatshop" mentality at the USPTO – just to keep their jobs or to earn productivity awards, fully two-thirds of the workforce must work unpaid overtime. Many of them work while on annual leave to make their production requirements.

Examiners are professionals. They want to do a high-quality job and gain recognition as outstanding employees. Like any employee, they appreciate monetary awards for their work. But there are only so many hours in a day.

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<sup>14</sup> Attachment 3. Dudas Letter to Cong. T. Davis, December 4, 2007, at page 3.

USPTO management has shown by its actions that it wants examiners to take shortcuts. It has demonstrated for years its willingness to accept lower quality patents in exchange for higher production. It has failed to maintain the U.S. classification system. It has destroyed decades of paper patent search files, many of them containing annotations from experienced examiners to aid in identifying relevant art. It stopped classifying foreign patent documents and non-patent literature using the U.S. classification system. This wealth of information, often provided, annotated and/or translated by senior examiners, has been lost to today's examiners and to the American public. It has perennially refused to adjust examiner production goals.

Examiners have done what USPTO management wanted them to do – take shortcuts in the examination process wherever possible. But even with shortcuts, two-thirds of them must work substantial amounts of unpaid overtime to meet their goals.

There is no more slack in the system. If the USPTO truly desires to retain highly skilled examiners and have them do the job right, the time has come for the agency to quit making excuses and follow the GAO's recommendation to "...undertake a comprehensive evaluation of the assumptions that the agency uses to establish its production goals."

It is important for Congress and the USPTO to note that providing examiners with the additional time to do the job right the first time does not necessarily require an increase in pendency. Providing examiners with additional time per application will result in greater retention. Greater retention means more experienced examiners moving more cases. In addition, doing the job right the first time increases the certainty that old or obvious ideas will be rejected. As this certainty becomes apparent, patent applicants will be less likely to expend the money and resources to file patent applications of little or questionable economic value. Indeed, letting examiners do the job right the first time may actually reduce application pendency over time.

Providing examiners with the time to do the job right should also benefit all Americans by reducing the costs of patent litigation – costs usually passed on to the consumer. In a study for the National Research Council of the National Academy of Sciences, John L. King calculated that providing examiners with a one-hour increase in time would cost the agency about \$11.3 million. King calculated, however, that a one-hour increase in examiner time would reduce patent litigation expenses by over \$17 million.<sup>15</sup>

Retaining highly skilled examiners, increasing the quality of patent examination, reducing patent application pendency and stimulating the American economy by reducing the costs of patent litigation thereby freeing up resources for other purposes, are clearly worthy goals of the intellectual property community. It should be equally as clear that providing examiners the time needed to do the job right the first time is the most cost-effective means to accomplish these goals.

## **DOING THE JOB RIGHT TAKES TOOLS**

The ongoing debate on patent reform has helped to focus criticism of the USPTO on the perceived failure of patent examiners to find the most relevant prior art references. Examiners, however, only have a very limited amount of time for searching the prior art and identifying the most relevant references. To do the job right the first time, the USPTO must provide examiners with search tools that will help them find the most relevant prior art in the shortest possible time.

Historically, however, the agency has chosen to destroy some of the very search tools that many examiners found most useful. USPTO management made a conscious determination to

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<sup>15</sup> King, John L., “Patent Examination Procedures and Patent Quality,” *Patents in the Knowledge-based Economy*, National Research Council of the National Academies, National Academies Press, 2003, pages 54-73 at pages 68-70.

save office space in its new Alexandria headquarters by eliminating the agency's voluminous paper search files. These files contained copies of U.S. patents sorted according to the U.S. classification system. The paper files also contained foreign and non-patent literature classified and placed in the files over the years by examiners in the various technologies. Many references contained additional information such as examiner notes and/or color drawings placed there by experienced examiners to assist other examiners working in that technology. Prior to the development of automated search tools, the paper search files represented the best and most comprehensive search tool for locating relevant prior art. They contained a remarkable wealth of information found nowhere else in the world.

Using the paper search files, examiners could draw on the experience of those examiners who had gone before. In years past, examiners were given non-examining time to identify relevant prior art and place it in the appropriate classified search file(s). Examiners would often add notes and other helpful information to these references to aid themselves and others searching in a particular technology. This continuous process resulted in a comprehensive database of prior art only available to those at the USPTO. In addition, the very act of placing new references in the classified files helped examiners to keep current on developments within their respective technologies. When new examiners searched the paper search files, they were receiving the benefit of the knowledge and experience of those examiners who had preceded them in the technology. This helped new examiners develop familiarity with the prior art and helped all examiners in quickly and efficiently finding the relevant prior art for each patent application.

Regrettably, as far back as the mid-1980s, the USPTO began transferring classification duties from examiners to technicians. Before long, management ordered that foreign patents and



non-patent literature no longer be included in reclassification projects. Eventually, this vital source of prior art became all but useless for searching. By the mid-1990s, as planning for a new headquarters facility began in earnest, management ended virtually all support for the U.S. Classification System and maintenance of the paper search files.

Today, the paper search files have all but disappeared at the USPTO. The agency disposed of all the copies of issued U.S. patents as it prepared to move to its Alexandria, Virginia headquarters. Although the remaining foreign and non-patent literature paper search files were moved to Alexandria, no new references are being classified and placed in those files and they no longer represent a viable search tool for examiners.

The end result of the agency's failure to maintain the U.S. Classification System and the paper search files is that examiners can no longer benefit from the wisdom and experience of prior examiners. Today, each search in a patent application is performed essentially from scratch. The agency's emphasis on text searching has resulted in a new generation of patent examiners inexperienced in the use of the U.S. Classification System.

Yet, even while it has put all its search eggs in the automation basket, the agency continues to fail in providing automated search tools that are adequate substitutes for older methods such as the paper search files. The agency has not provided any useful means for examiners to electronically annotate patent documents analogous to the paper search files. Today, examiners have no meaningful way to share their experience with other examiners except by word-of-mouth. Another major perennial frustration for examiners is the agency's continued unwillingness to expend the resources to get all issued patents into a single text-searchable database. With the advent of the Automated Patent System in the mid-1980s, the USPTO began entering all new issued patents in both text and image searchable form into its issued patent

database. Unfortunately, while all issued patents were entered in image format, the text-searchable database only goes back to about 1970. Patents issued prior to 1970 have not been entered in the database in a readily text searchable form. The agency did submit these older patents to optical character recognition but did not correct errors and did not index this database in the same manner as the Automated Patent System database. Thus, this database, referred to by examiners as the “dirty OCR file” because of its numerous errors, cannot be readily and reliably searched simultaneously with the Automated Patent System database. Examiners working in older technologies have to perform two searches of the issued patents to determine patentability of an applicant’s claimed invention. This is one more uncompensated drain on examiners’ time.

Now, after neglecting the U.S. classification system and eliminating one of the most useful and unique search tools in the world – the paper search files – the agency wants to finish the job of effectively outsourcing the search to patent applicants by obtaining statutory authority to require all or nearly all patent applicants to perform a mandatory search and submit an Applicant Quality Submission (AQS) in their patent applications. Publicly, the agency maintains that patent applicants should share the burden of quality examination with the USPTO by placing the most relevant prior art in front of the examiner prior to examination. If the AQS would actually accomplish this goal and were quality examination the agency’s real reason for wanting the AQS, then this would be an admirable undertaking. But such is not the case.

The USPTO has had regulations in place for many years that places a duty of candor on patent applicants. Each individual patent applicant has a “duty to disclose to the Office all

information known to that individual to be material to patentability...”<sup>16</sup> This rule, were it properly enforced, should be sufficient to place the best prior art known to the applicant in front of the examiner. The USPTO does not need another law to make applicants submit prior art, it needs to enforce its currently existing rules.

There is no reason to believe that the AQS will put the best art in front of examiners. Should applicant perform his/her own search, it is highly likely that the applicant would electronically search the same patent and non-patent literature databases currently searched by examiners, i.e., the U.S. and foreign patent databases and such commercial non-patent literature databases as Dialog™ or STN™. It is reasonable to presume that the applicant may well use some of the very same keyword search terms as an examiner. Thus, the applicant’s search is not likely to identify relevant prior art that the examiner would not uncover. Only in those rare circumstances where the applicant is personally aware of some relevant prior art not readily available in commonly searched databases, is it likely that the applicant would place the most relevant prior art in front of the examiner. In those situations, existing regulations require the applicant to disclose that prior art.

The examiner, however, will likely uncover relevant prior art not identified by applicants. Why? Because examiners give patent claims their broadest reasonable interpretation – an interpretation not always readily apparent to patent applicants. Applicants are usually much more focused on what they truly believe is the critical essence of their invention. Examiners, on the other hand, will look at claims more broadly and often reject claims over prior art the applicant would never have foreseen.

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<sup>16</sup> 37 C.F.R. § 1.56.

Conversely, should applicant contract out the AQS search to a commercial search entity, it is equally likely that the commercial searcher will search the same databases searched regularly by examiners. Therefore, it is unlikely that this search will uncover relevant prior art that the examiner would not find during his/her search.

In neither circumstance, is it likely that obscure prior art will be identified and placed before the examiner. Neither of these scenarios should be expected to find such obscure art as the prior art relied upon in the well-known RIM v. NTP Blackberry case. Only millions of dollars and cadres of litigators is likely to uncover that type of prior art.

The only clear effect of the AQS is to dramatically increase the cost of applying for a patent. For some small inventors, this cost may become prohibitive. Why then would the USPTO be lobbying so hard for the AQS?

The real reason the agency wants AQS is to effectively outsource the patent search to applicants so that it can “gain efficiency” by reclaiming that search time from examiners thereby requiring them to examine more cases. The real truth about AQS is that it is not an USPTO initiative to improve quality – it is an initiative to reduce pendency.

Since first publishing its “21<sup>st</sup> Century Strategic Plan” in 2002, the agency has attempted to outsource the patent search and remove that duty from examiners. Until now, this outsourcing effort has been thwarted by the actions of this Subcommittee in requiring a properly implemented pilot program prior to authorizing the agency to outsource searches. Now the agency is attempting to circumvent those requirements by obtaining statutory authority for the AQS.

POPA believes that the patent search is an integral part of the examination process and represents an inherently governmental function that should not be outsourced to the private

sector. As the patent search forms the very basis of determining property rights in the United States, the search should be performed by U.S. Government employees free of any conflicts of interest – USPTO patent examiners.

POPA extends its gratitude and commends Subcommittee Chairman Berman, Ranking Member Coble and the Members of the Subcommittee for amending the language of H.R. 1908, the Patent Reform Act of 2007, to insure that the AQS cannot be used as a substitute for an examiner prior art search. No such language exists in the Senate version, S. 1145.

Because the AQS will dramatically increase the cost of protecting innovation in America and because its potential benefits are speculative at best, POPA suggests at this time that the requirement for the AQS be deleted from the proposed patent reform legislation. POPA believes that resources would be better utilized in enforcing compliance with existing USPTO rules regarding applicant prior art disclosure.

## **WHAT EMPLOYEES NEED TO DO THE JOB RIGHT**

There are several things the Subcommittee can do that POPA believes will have significant effects on improving examination quality and reducing pendency of pending patent applications.

### **Fee Retention**

POPA encourages the Subcommittee to continue working together with their colleagues on the Appropriations Committee and with the Administration to insure that the USPTO continues to have access to all of its fees. POPA believes that this access, however, must not be obtained at the expense of the oversight responsibilities of both the Judiciary and Appropriations

Committees. We believe that this oversight responsibility is critical in providing guidance too – and in some cases redirecting – the USPTO in the appropriate uses of its resources.

### **Put An End To Outsourcing Searches**

The USPTO has wasted considerable and much-needed resources in its attempts to outsource patent searches in 2004-2005 and now in 2007-2008 with the Applicant Quality Submission. Outsourcing searches will not result in better quality patents and will likely create conflicts of interest for applicants. The Subcommittee should put an end to this waste by passing legislation that clearly establishes patent searching and examination as inherently governmental functions.

### **Improve Quality and Retention By Providing Time For Examination**

For over thirty years, USPTO management has refused to adjust examiner production goals in the face of ever-increasing workloads. POPA believes that it is now time for Congress to step in and correct this long-felt need. The Subcommittee can do much to improve the quality of examination and increase retention of examiners by providing for a direct allocation of time for examination.

The USPTO has two major revenue streams. At the front end of the examination process, the agency collects patent filing fees for Filing, Search, Examination, and Excess Claims and Specifications. These filing fees represent approximately 30 percent of the agency's total patent fees, leaving the remaining 70 percent of total patent fees to cover the overhead expenses of the agency. Those fees, in the form of Issue Fees and Maintenance Fees, are collected after allowance of a patent.

POPA asks that the Subcommittee put a fence around the patent filing fees and directly allocate these fees to provide time for examiners to examine patent applications.

Fencing off USPTO fees for particular purposes is not without precedent – such a fence currently exists around USPTO fees collected for trademark applications.<sup>17</sup>

### **Provide Appropriate Search Tools**

While many of USPTO management's decisions regarding paper and automated search files are now irreversible, POPA hopes that the Subcommittee will work to insure that the agency develop better and faster search tools providing the functionality examiners need to improve searching and examination quality.

Examiners need automated search tools that will allow them to annotate references for their's and other's future reference. Institutional memory is rapidly disappearing as senior examiners retire or otherwise leave the agency. Putting in place tools that allow reference annotation and providing examiners with the time to do so, will allow today's examiners to share their wisdom and experience with the examiners of tomorrow.

The USPTO needs to reverse its previous policy of neglect, restore full funding to the U.S. classification system and develop automated tools to allow examiners to classify and add foreign and non-patent references to USPTO databases. There are very few former classifiers left in the agency. Before their institutional memory is also lost forever, they need to be put back to work training new classifiers and examiners and updating the U.S. classification system so that examiners and the public can more rapidly find relevant prior art. The Subcommittee can help to improve examination quality by making sure that the agency resumes support of classification.

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<sup>17</sup> 35 U.S.C. 42(c).

Finally, the agency should listen to examiners and apply resources to improving existing examiner tools, e.g., cleaning up the “dirty OCR file” and adding the data to the agency’s existing text and image searchable patent database.

Mr. Chairman, Members of the Subcommittee, on behalf of all the patent professionals of POPA, I thank you for this opportunity to share with you their concerns. I look forward to working with you to provide the time and resources that will keep America’s patent system strong and allow us to do the job right the first time.



# **ATTACHMENT 1**



**Voting Committee  
Members:**

Kevin G. Rivette, Chairman  
Institute for Progress

Maximilian A. Grant  
Latham & Watkins, L.L.P.

Carl E. Gulbrandsen  
Wisconsin Alumni Research  
Foundation

Dean L. Kamen  
DEKA Research and  
Development

Gerald Mossinghoff  
Oblon, Spivak, McClelland,  
Maier & Neustadt, P.C.

Lisa K. Norton  
DLA Piper US LLP  
Gray Cary

Douglas Patton  
Patton Design, Inc.

M. Andrea Ryan, Esq.  
TransForm Pharmaceuticals

W. David Westergard  
Micron Technology Inc.

**Non-voting  
Representatives:**

Robert D. Budens, President  
Patent Office Professional  
Association (POPA)

Sharon M. West, President  
National Treasury Employees  
Union (NTEU, Local 243)

Catherine Faint  
Vice President  
National Treasury Employees  
Union (NTEU, Local 245)

## PATENT PUBLIC ADVISORY COMMITTEE OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

November 30, 2007

The President  
The White House  
Washington, DC 10500-0001

Dear Mr. President:

As Chairman of the Patent Public Advisory Committee (PPAC), I am pleased to enclose the Committee's FY2007 Annual Report.

The Committee believes that the United States patent system and the United States Patent and Trademark Office ("USPTO") face significant challenges that urgently need to be addressed today. The issues of patent quality and pendency override all other issues. In this report we have deviated from the traditional PPAC annual report format and attempted to provide you with a concise explanation of these issues, of the consequences of inaction and with concrete recommendations to address these issues. Our firm conviction is that these issues are surmountable.

The Committee is committed, along with the Under Secretary of Commerce for Intellectual Property and the Director of the USPTO, to ensure that the United States' patent system continues to be the wellspring of America's economic competitiveness and that America herself continues to be the innovation leader for the entire world.

Sincerely,

Kevin G. Rivette  
Chair

Enclosure: 2007 Annual Report

cc: Enclosure: PPAC FY 2007 Annual Report

cc: The Honorable Patrick J. Leahy, Chairman, Senate Judiciary Committee  
The Honorable John Conyers, Jr., Chairman, House Judiciary Committee  
The Honorable Arlen Specter, Ranking Member, Senate Judiciary Committee  
The Honorable Lamar S. Smith, Ranking Member, House Judiciary Committee  
The Honorable Carlos M. Gutierrez, Secretary of Commerce  
Jon W. Dudas, Under Secretary of Commerce for Intellectual Property and  
Director of the United States Patent and Trademark Office  
Margaret J. A. Peterlin, Deputy Under Secretary of Commerce for Intellectual  
Property and Deputy Director of the United States Patent and Trademark  
Office  
John J. Doll, Commissioner for Patents

# **ATTACHMENT 2**

### Attrition of Patent Examiners (including SPEs)

	FY Hires	>1	≥1 and <2	≥2 and <3	≥3 and <4	≥4 and <5	≥5 and <6	≥6 and <10	≥10 and <15	≥15	Total Attrits	BoY Staff	EoRP Staff	Staff Increase	Average Staff	Attrits as % of Avg Staff	
FY 90	503	79	33	20	18	12	11	22	3	49	247	1550	1811	117%	1681	14.7%	
FY 91	227	63	40	28	4	16	5	14	1	39	210	1811	1835	101%	1823	11.5%	
FY 92	227	27	32	31	8	14	11	10	4	29	166	1835	1898	103%	1867	8.9%	
FY 93	210	29	6	19	15	12	7	8	4	31	131	1898	1979	104%	1939	6.8%	
FY 94	216	20	16	9	15	15	13	12	5	56	161	1979	2036	103%	2008	8.0%	
FY 95	283	29	30	16	11	17	16	14	5	24	162	2036	2162	106%	2099	7.7%	
FY 96	443	39	42	11	4	15	12	27	9	31	190	2162	2366	109%	2264	8.4%	
FY 97	209	53	51	25	11	22	12	37	3	25	239	2366	2329	98%	2348	10.2%	
FY 98	728	91	40	30	9	19	13	27	6	24	259	2329	2785	120%	2557	10.1%	
FY 99	799	191	40	16	26	18	10	30	17	27	375	2785	3205	115%	2995	12.5%	
FY 00	375	157	114	37	10	28	9	42	16	24	437	3205	3143	98%	3174	13.8%	
FY 01	414	84	58	41	14	4	12	18	15	17	263	3143	3296	105%	3220	8.2%	
FY 02	769	119	15	23	16	16	7	12	19	23	250	3296	3803	115%	3550	7.0%	
FY 03	308	76	48	16	10	25	12	7	18	29	241	3803	3850	101%	3827	6.3%	
FY 04	443	83	38	53	28	22	25	21	16	50	336	3850	3959	103%	3905	8.6%	
FY 05 est	959	101	45	35	56	30	23	37	17	59	425	3959	4493	113%	4226	10.1%	
<b>Total Hire</b>	<b>7113</b>										<b>Grand Total Attrits</b>	<b>4092</b>					

FY Hires	Attrits <3 of Total years		Attrits ≥3 of Total and <15		Attrits >15 years		Total Attrits	BoY Staff	EoRP Staff	Staff Increase	
	Attrits	Percentage	Attrits	Percentage	Attrits	Percentage					
FY 90	503	132 53%	66 27%		49 20%		247	1550	1811	117%	
FY 91	227	131 62%	40 19%		39 19%		210	1811	1835	101%	
FY 92	227	90 54%	47 28%		29 17%		166	1835	1898	103%	
FY 93	210	54 41%	46 35%		31 24%		131	1898	1979	104%	
FY 94	216	45 28%	60 37%		56 35%		161	1979	2036	103%	
FY 95	283	75 46%	63 39%		24 15%		162	2036	2162	106%	
FY 96	443	92 48%	67 35%		31 16%		190	2162	2366	109%	
FY 97	209	129 54%	85 36%		25 10%		239	2366	2329	98%	
FY 98	728	161 62%	74 29%		24 9%		259	2329	2785	120%	
FY 99	799	247 66%	101 27%		27 7%		375	2785	3205	115%	
FY 00	375	308 70%	105 24%		24 5%		437	3205	3143	98%	
FY 01	414	183 70%	63 24%		17 6%		263	3143	3296	105%	
FY 02	769	157 63%	70 28%		23 9%		250	3296	3803	115%	
FY 03	308	140 58%	72 30%		29 12%		241	3803	3850	101%	
FY 04	443	174 52%	112 33%		50 15%		336	3850	3959	103%	
FY 05 est	959	181 45%	163 38%		59 14%		425	3959	4493	113%	
<b>Total Hire</b>	<b>7113</b>	average 55%	average 31%		average 15%		<b>Grand Total Attrits</b>	<b>4092</b>			

### Attrition of Patent Examiners (including SPEs)

FY Hires		Attrits <4 years	Percentage of Total Attrits	Attrits ≥4 and <15	Percentage of Total Attrits	Attrits >15 years	Percentage of Total Attrits	Total Attrits	BoY Staff	EoRP Staff	Staff Increase
FY 90	503	150	61%	48	19%	49	20%	247	1550	1811	117%
FY 91	227	135	64%	36	17%	39	19%	210	1811	1835	101%
FY 92	227	98	59%	39	23%	29	17%	166	1835	1898	103%
FY 93	210	69	53%	31	24%	31	24%	131	1898	1979	104%
FY 94	216	60	37%	45	28%	56	35%	161	1979	2036	103%
FY 95	283	86	53%	52	32%	24	15%	162	2036	2162	106%
FY 96	443	96	51%	63	33%	31	16%	190	2162	2366	109%
FY 97	209	140	59%	74	31%	25	10%	239	2366	2329	98%
FY 98	728	170	66%	65	25%	24	9%	259	2329	2785	120%
FY 99	799	273	73%	75	20%	27	7%	375	2785	3205	115%
FY 00	375	318	73%	95	22%	24	5%	437	3205	3143	98%
FY 01	414	197	75%	49	19%	17	6%	263	3143	3296	105%
FY 02	769	173	69%	54	22%	23	9%	250	3296	3803	115%
FY 03	308	150	62%	62	26%	29	12%	241	3803	3850	101%
FY 04	443	202	60%	84	25%	50	15%	336	3850	3959	103%
FY 05 est	959	237	59%	107	25%	59	14%	425	3959	4493	113%
<b>Total Hire</b>	<b>7113</b>	<b>average</b>	<b>61%</b>	<b>average</b>	<b>24%</b>	<b>average</b>	<b>15%</b>	<b>Grand Total Attrits</b>	<b>4092</b>		

# **ATTACHMENT 3**



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

DEC - 4 2007

The Honorable Tom Davis  
Ranking Member, Committee on Oversight  
and Government Reform  
House of Representatives  
Washington, D.C. 20515

Dear Representative Davis:

In accordance with 31 U.S.C. 720, the Department of Commerce, through the United States Patent and Trademark Office (USPTO), provides this action plan in response to the Government Accountability Office (GAO) report *Hiring Efforts Are Not Sufficient to Reduce the Patent Application Backlog*. The GAO recommends that the USPTO undertake a comprehensive evaluation of the assumptions used to establish production goals.

### GAO's Principal Findings

The GAO report draws attention to issues that are of paramount importance to the USPTO. In particular, the report highlights the fact that the problems associated with the long time to decision in patent applications cannot be solved by hiring alone. It also recognizes, as does the USPTO, that attrition of patent examiners can impair the effectiveness of the USPTO's hiring efforts.

### ***USPTO Initial Response – "Flat Goal Pilot Program"***

As noted above, the GAO recommends that the USPTO undertake a comprehensive evaluation of the assumptions used to establish production goals (for examination of patent applications). Even before the GAO published its report, the USPTO appreciated the questions and concerns raised by GAO staff during their review process. In direct response to points raised by GAO staff during their study period – which are also reflected in the GAO's final report – in April 2007 the USPTO initiated a "Flat Goal Pilot Program." The Flat Goal Pilot Program tests a new concept in how production is measured. Under the year-long pilot (April 2007-April 2008), examiners may earn larger, quarterly bonuses for every application examined above a particular target goal. Early indications are that participants prefer quarterly, as opposed to annual, bonuses. They also appear to prefer the per-application bonus as opposed to the present productivity award structure and enjoy the flexibility of choosing when and how to do their work.

After April 2008, when the USPTO has sufficient data from this year-long pilot, a full evaluation will be possible. The USPTO will then determine how the results relate to the underlying assumptions that form the basis of the pilot and incorporate that information into future planning.



### Additional USPTO Action/Response

A somewhat more detailed examination of examiner attrition levels, which the brief GAO analysis did not undertake, yields a somewhat different diagnosis of the latter issue. In noting this, we emphasize our complete agreement with GAO that a strategy of hiring alone is not sufficient to reduce the patent application backlog. To reduce the backlog, we must continue to promote appropriate ways to increasing the efficiency and productivity of examination. We also agree that patent examiner attrition is an important matter deserving further analysis and attention. Patent examiners are critical to our system of protecting intellectual property and driving innovation in the United States. The USPTO has achieved notable successes in examiner retention efforts and faces challenges that the GAO study did not address. We will address some of these successes and challenges below.

### Facts About Patent Examiner Attrition

The USPTO has kept attrition statistics for several decades and highly detailed statistics for the past ten fiscal years (since FY 1998). The following are five facts that have proven instructive to us in addressing attrition.

- (1) **Attrition is lower at the USPTO than throughout the Federal workforce.** The USPTO's attrition rate is *lower* than the average attrition rate for Federal workers (8.5% vs. 11.2%).<sup>1</sup>
- (2) **Beyond the first three years of service, the USPTO has nominal attrition.** The average attrition rate for USPTO patent examiners with 0-3 years experience is 15.5%. The average attrition rate for USPTO patent examiners with 3-30 years experience is 3.95%.
- (3) **Attrition in the early years is substantially lower at the USPTO than at similarly situated entities.** The attrition rate of examiners with 0-3 years experience, though measurably higher than the rest of the patent corps, appears to be well below the attrition rate experienced by similarly situated entities hiring more than 1,000 engineers in a year.<sup>2</sup>

<sup>1</sup> See <http://data.bls.gov/cgi-bin/dsry>

<sup>2</sup> Business Week, "50 Best Places to Launch a Career," September 18, 2006.

[\*\*\*Given the country's demographics, some accommodation is inevitable. Entry-level hiring is expected to surge in 2007 by more than 17%, the fourth consecutive double-digit increase, according to the National Association of Colleges & Employers (NACE). And this could be only the beginning. By 2010, as the exodus of baby boomers from the workforce accelerates, census data suggest, two employees will be leaving for every new hire entering, and new college grads will be a precious commodity.\*\*\*

\*\*\*If recruiting is employers' first hurdle, retention is by far the highest. Those employers who provided the data reported that more than one-third of their new hires bolted within three years. And replacing them isn't cheap. Training costs averaged nearly \$10,000 a head, which can add up quickly when you're hiring more than 1,000 college grads each year, as more than one-third of the ranked

- (4) **Higher production requirements do not translate to higher attrition.** Examiners with the highest production requirements have the lowest attrition rates, and the examiners with the lowest production requirements have the highest attrition rates. In fact, 70 percent of all work in FY 2007 was done by examiners with 3 or more years of experience who *exceeded* their production goals by an average of 8 percent and had an average attrition rate of 3.95 percent.
- (5) **Nearly all examiners exceed production requirements. An important majority exceed it substantially.** More than 60% of all patent examiners *exceeded their production requirements by at least ten percent* in FY 2006.

These facts direct us to focus our attrition analysis on the areas where it is most problematic and to look for solutions that provide all examiners more opportunity and flexibility.

#### The Patent Examination Landscape

We agree with the GAO's title conclusion that hiring is not sufficient to reduce the patent application backlog. In fact, the USPTO has for years reported to other policymakers and key constituencies that hiring is necessary but not sufficient as a strategy to address the backlog. With record-breaking numbers of applications *every* year and the USPTO already hiring the equivalent of whole-number percentages of American engineering graduates, hiring alone is a poor long-term policy. The right solution includes a synergistic combination of hiring and increased efficiency in the system, possibly by leveraging work already being done by patent applicants, the public and other patent offices throughout the world. The USPTO has implemented several pilot and permanent programs, proposed rules and promoted statutory changes to effect these goals of increasing quality, reducing redundancy and increasing efficiency in the system.

The USPTO also believes sincerely in the knowledge, skills, abilities, integrity and work ethic of its employees. Any solution to address improving the patent system, particularly addressing the patent application backlog, must begin and end with an evaluation of its effect on patent examiners. This is another area where the USPTO has been particularly focused in the last several years. The USPTO's approach has been to increase opportunity and flexibility for examiners rather than to lower standards. The results of giving examiners more opportunities and increased flexibilities speak for themselves – higher morale and satisfaction, and higher productivity and efficiency.

For example, in the last two years, 1,000 patent examiners have started working almost full-time from home. According to a recent survey of these employees, 83% said their morale

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employers do.\*\*\* The main reason young employees are heading for the exits, oddly enough, is the very thing boomers thrived on: the perpetual work day.\*\*\*"]

See also, Business Week, "Best Places to Launch a Career," September 13, 2007 [\*\*\*\*Boeing Co. (BA) (No. 14) is starting to move in that direction. The aerospace giant has one of the lowest retention rates in its industry (59%), and one way it hopes to improve upon this is by teaching managers how to deliver criticism—harsh, if necessary—along with praise.\*\*\*\*"]

improved. Independent analysis demonstrates that – for these same 1,000 patent examiners, productivity increased by approximately 10%. Other examples of increasing morale and efficiency by increasing opportunity and flexibility are reviewed below.

#### Additional GAO Findings

Together with the GAO, we fully appreciate that the work of patent examination – and particularly the patent production requirements - is a nuanced, multi-faceted undertaking, not susceptible to easy “quick fixes.” We must find a way forward that aligns perceptions with realities and results in an even higher morale, higher performing organization.

The GAO report indicates that many patent examiners work unpaid overtime to meet production goals, that many examiners leave because of those high production goals, and that the USPTO’s hiring rate will not reduce the patent application backlog. The GAO report further suggests that by lowering production goals, fewer examiners would leave the USPTO, giving the USPTO more employees to combat the patent application backlog. We believe a thorough analysis of the data does not support each of those propositions. In fact, the data shows that lowering standards will increase the backlog. The data also suggests that the solution lies in finding the right combination of increased opportunities and flexibilities for examiners. While we fully agree with the conclusion to further study production goals, we came to that conclusion for different reasons than the GAO – and provide the following information in support of our conclusion.

#### USPTO’s Attrition Analysis

The USPTO has been analyzing and addressing patent-examiner attrition with several innovative techniques since it began increasing hiring in FY2005. First, we have – by careful data capture – identified an attrition trend line.

Attrition is greatest in the first 12 months from the date of hire. Since 1998, first-year attrition has fluctuated from a high of 28.3% in FY 2000 to a low of 15.1% in FY 2003. In FY 2007, first-year attrition for patent examiners was about 15.6%. That is nearly five points, or twenty-two percent, *less* than the average first-year attrition rate of about 20%.

Second-year attrition again varies, with an average attrition rate over the past nine fiscal years of around 13.5%. Third-year attrition over the same period averages around 9.7%. After the third year, attrition rates decline, hovering around 3.95% for examiners who have been at the USPTO for 3 - 30+ years.

#### What Does This Information Mean?

Perhaps surprisingly, first-through-third year patent examiner attrition at the USPTO is much lower than private-sector attrition in relevant sections such as engineering, computers, and general technology.<sup>3</sup> To provide some perspective, for the most recent fiscal year (FY2007), overall examiner attrition was 8.5%. This attrition rate compares favorably to overall Federal

<sup>3</sup> See <http://data.bls.gov/cgi-bin/dsrv>

employee attrition which, in calendar year 2006, was 11.2%.<sup>4</sup> Turnover in the private sector, particularly for engineers and computer scientists (technical areas of hiring focus for the USPTO), can be even higher, tracked by the Bureau of Labor Statistics at 45.5% percent for calendar year 2006, and reflecting the tendency of engineers and computer scientists to change jobs frequently.

While our historic 20% attrition rate for first-year employees is significantly less than that seen in the relevant private sector, the USPTO does not have the same tools available to the private sector which permit spreading costs of attrition over other business lines. In other words, we refuse to view higher attrition as “cost of doing business.” Further, we have been chosen by *Business Week* magazine as one of the best places in America to launch a career, and we aim to be an employer of choice who really looks at employees as family members with whom we want a long-term relationship. Camaraderie is a morale factor that should not be ignored, and turnover does not contribute to camaraderie.

Our newest examiners represent the future, and a long career of service to America. We want to retain them. Similarly, our most senior examiners represent decades of experience, and handle the most complex patent applications with facility. While we do not wish to keep them from a well-deserved retirement, every year we can encourage them to stay with the USPTO is an extra year that the public benefits from their expertise. For these reasons – higher than desired front-end attrition and general retirement attrition – we must continue to focus our retention efforts on the newest and the most senior examiners.

#### What We are Doing

We are concerned with attrition and our efforts reflect that concern. The USPTO has remained committed to a strong work life quality program, including:

- Flexible work schedules (available to all USPTO employees);
- Expansive teleworking programs;
- Reimbursement for advanced technical education and law school;
- Recruitment bonuses (primarily available to patent examiners);<sup>5</sup>
- Retention bonuses (primarily available for patent examiners);
- Special pay increase of 10% for all patent examiners;
- Part-time employment available to all employees;

<sup>4</sup> Bureau of Labor Statistics (BLS) statistic for calendar year 2006, identifying the total percentage of Federal employees leaving the workforce for reasons other than retirement or performance – in other words, employees who quit.

<sup>5</sup> To receive a recruitment bonus, the examiner must make a four-year commitment to stay with the USPTO. The four-year commitment is based on our attrition analysis which, as mentioned earlier, demonstrates a strong historical trend toward greatly reduced attrition after three years with the USPTO. The recruitment bonus is paid in four installments – 25% up front, and progressive payouts every six months. To maintain eligibility, examiners must maintain at least “Fully Successful” performance. If they choose to leave before fulfilling their time commitment, they must return a prorated portion (e.g., if they leave after six months of service, they would owe 50% of their upfront incentive) of the recruitment bonus.

- “Flat Goal” pilot;<sup>6</sup>
- Lap top computers available for work away from the office;
- Increased productivity award programs for patent examiners;
- Increased training opportunities tailored to examiners’ needs;
- Focused training for new examiners; and
- Movement toward a nationwide workforce.

Although our patent-examiner recruitment bonus program is only 16 months old (started July 2006), we are already seeing positive results. Among examiners who received recruitment bonuses, the first-year attrition rate was 10 %, which compares favorably to the more general first-year attrition rate of 15 % for examiners hired during this same period who did not receive the bonus. Both are well below the 10-year average of 20%. Of course, one year’s worth of data is not sufficient to indicate a trend, so we are continuing to assess the impact of recruitment bonuses – and the other above-mentioned incentives – on retention. But the early favorable results give us hope that recruitment bonuses will be a sufficient incentive to encourage patent examiners to stay with the USPTO at least three years – until a time when, given historical attrition trends, attrition drops dramatically, employees become more comfortable and stay with the USPTO for much longer periods.

#### Previous Recommendations Have Proven Valuable

We are targeting recruitment bonuses for maximum impact on attrition. In addition to targeting recruitment bonuses for new hires in hard-to-fill examiner positions, we also are relying on exit interviews for insight as to why people are attracted to the USPTO and why they leave. The USPTO has a formal exit interview process in place to collect quantitative as well as qualitative data on reasons for leaving the Agency. We have discovered that a variety of reasons exist for leaving the USPTO, ranging from having pursued two job offers before joining USPTO and leaving shortly thereafter to take the initial, higher-paying or more geographically desirable job, to a simple incompatibility with the task of examining patent applications.

The USPTO has also worked with the Office of Personnel Management (OPM) to establish compatibility criteria and survey applicants before they are hired, to better identify candidates suited for the job of patent examination. Currently, every potential patent examiner who receives a job offer takes our compatibility assessment. Our plan is to make that compatibility survey tool available to all interested parties, which might help potential applicants self-select so only those who believe the USPTO is the place for them take the next step and submit an application.

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<sup>6</sup> Instituted on April 1, 2007, this one-year pilot is intended to test a new conceptual approach to production. A variation is already successfully in place in the Trademark Operations, for GS-13 and 14 examining attorneys. The Patent flat-goal pilot is voluntary and currently includes participants. In contrast to the current yearly production goals, with yearly award payouts, under the flat-goal pilot, goals are set quarterly, with quarterly award payouts.

We are reporting the flat goal (when the pilot is evaluated) under Final Inspection Report No. IPE-15722.

### Impact of the Production System on Attrition

Because attrition is highest in the first three years after hiring, and quite low thereafter, we need to review carefully the premise that a production-based system of examination is – in itself – responsible for overall attrition.

We appreciate that examiner reports of working excessive overtime suggested to GAO that patent examiners' production goals are too high. We have too much collective experience to dispute the fact that some employees feel that expectations are too high, and that any given work period is too short a time in which to complete a task. We are, however, struck by the fact in Fiscal Year 2006, the most recent year for which we have complete data, more than 60% of patent examiners received a performance award for exceeding 110% of their production goal. Further, over two thirds of junior patent examiners (examiners at the GS-7 – GS-11 levels) received a timely promotion based on demonstrated performance that included production in excess of 107%. In other words, a majority of patent examiners are not struggling to maintain “fully successful” levels of performance. They are over-achieving, if you will, choosing to do more than is required of them – and, appropriately, receiving bonus money for their efforts.

There is other data suggesting that production goals are at proper levels. For example, a September 2004 Office of the Inspector General (IG) report indicated that the seven technology centers they reviewed surpassed the 100-percent production level for the five-year assessment period. In other words, on average the employees in those technology centers spent less time than their expectancy production goals to process applications.

It is clear that some patent examiners leave the USPTO because of their dissatisfaction with production goals. This does not mean production goals are too high for most examiners, for the USPTO, or for patent applicants who depend upon timely review of their applications. This is particularly true for examiners who have been at the USPTO for more than three years, where 70% of production occurs and attrition averages less than four percent.

Examining patent applications is rigorous work. The USPTO is a performance-based agency, which is not attractive to everyone. The attrition data and performance award statistics we have gathered do not compel the conclusion of a nexus between attrition and production requirements. Better initial training, having the right working environment, accessibility to senior employees who can provide guidance, and more community activities are themes for improvement that we have heard from employees in exit interviews, at town hall meetings, and at brown-bag lunches. Most patent examiners appreciate that applicants need a timely assessment of their applications – and many patent examiners are willing to work above and beyond minimum requirements to ensure that applicants are served well. At the USPTO, we are very proud of the patent examiners and, indeed, all of our employees.

### Next Steps

We agree with GAO's conclusion that hiring alone will not solve the backlog of unexamined patent applications. We also agree that the assumptions underlying patent-examiner production goals merit reevaluation, particularly in light of various quality initiatives. The

USPTO will consider all of these factors as we continue to work with GAO in evaluating the underlying assumptions used to establish examiner production goals.

As we hope the information provided above makes clear, we are analyzing our attrition data carefully to determine if there is a nexus between attrition and the production system. If attrition proves to be unrelated to the production environment, we may find that initiatives designed to reduce redundancy, leverage existing work, and make applications more focused are the most meaningful ways to reduce the patent application backlog.


The USPTO's plan is to evaluate the full impact on examiner retention of the many work-life initiatives in progress. If our work-life efforts continue to lower attrition as they have in just one year, we believe we will have identified the right mix of production standards that improve our service to the public and offer employees more opportunity and satisfaction.

The USPTO will initiate the following actions as first steps in addressing the recommendation in the final report:

- Partner with the GAO to gain comprehensive, valid, and meaningful attrition data from the private sector;
- Provide GAO with regular updates on attrition/retention results and analysis;
- Pilot additional alternative(s) that are seen as having potential benefits; and
- Provide GAO with data from/analysis of the data from the "Flat Goal Pilot Program."

On behalf of the USPTO, I wish to express my thanks for the GAO's thorough review of this important issue.

Sincerely,



JON W. DUDAS  
Under Secretary and Director

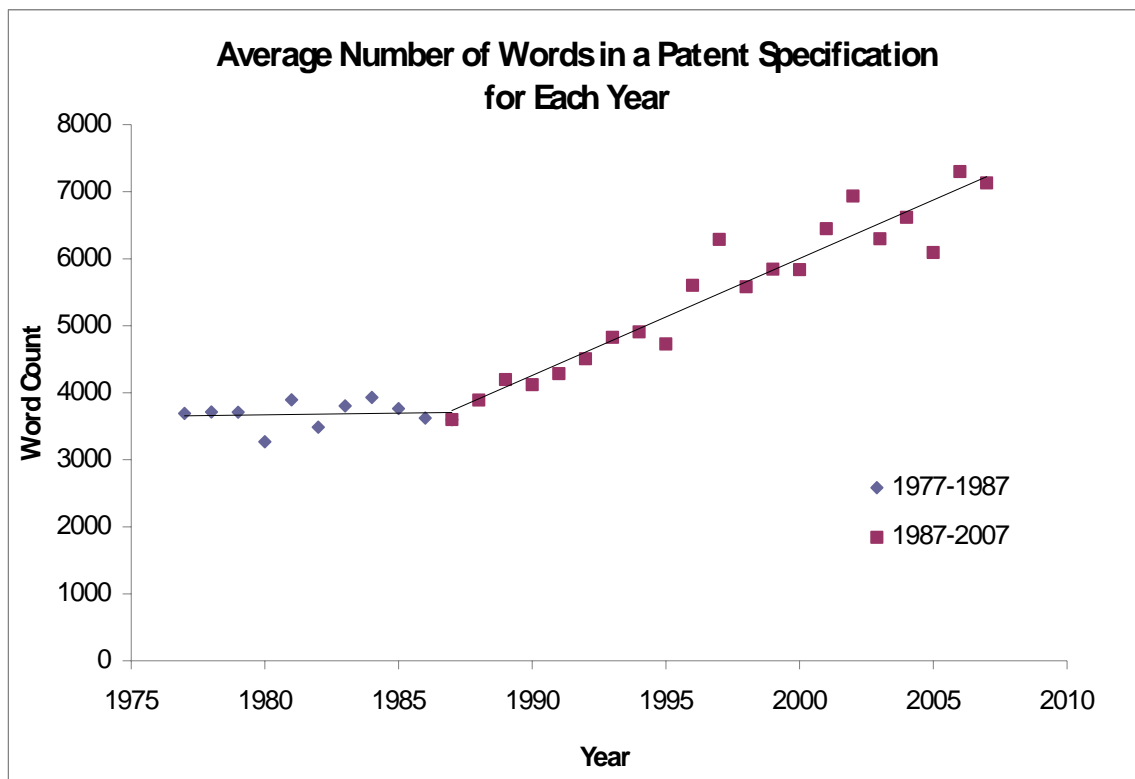
# **ATTACHMENT 4**



# The Rising Size and Complexity of the Patent Document

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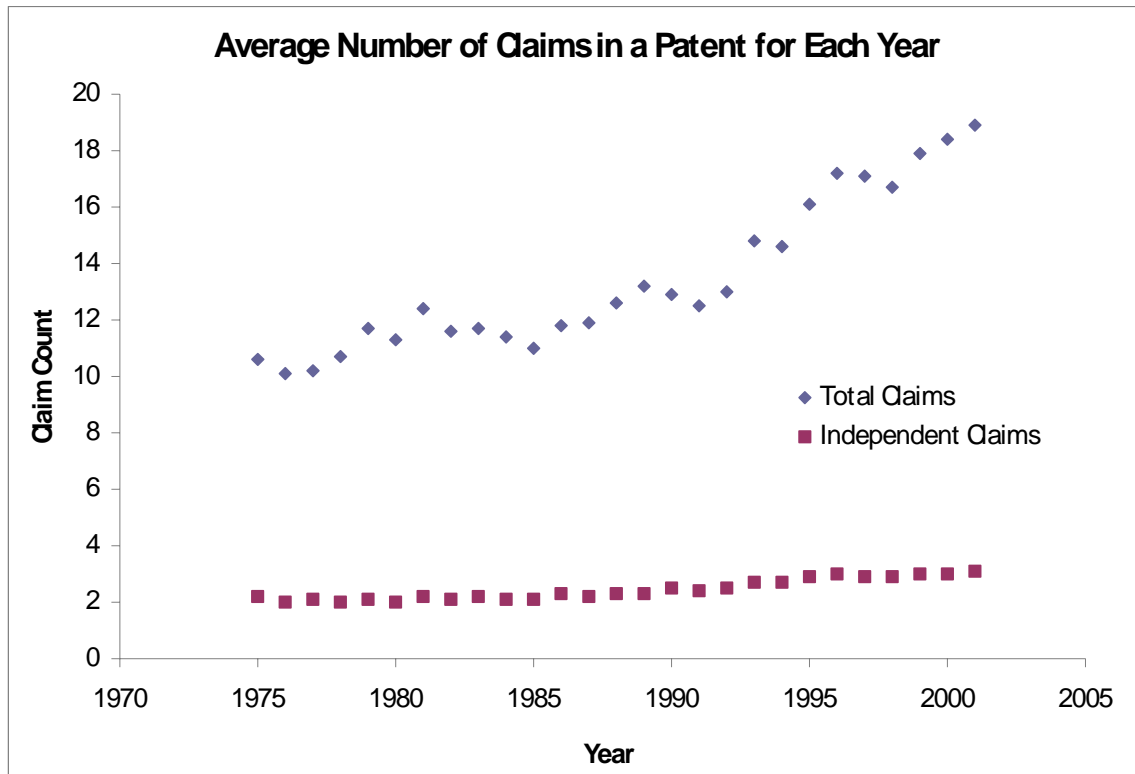
February 20, 2008



The above word count chart shows the results of a study of 10,000 U.S. patents issued between January 1977 and December 2007. Using a software algorithm, I counted the number of words in the description portion of each patent. This excludes claims, title, abstract, references, and other identifying information. To amplify the results, I added two trend-lines. The first trend-line runs from 1977 to 1987 and has essentially no slope — indicating that the length of patents remained steady over those years. The second trend-line runs from 1987 – 2007 and has a clearly positive trend-line indicating that the number of words is increasing over time. Because of the large sample size, I am very confident (99.9% CI) that the average patent length has been steadily increasing.

For further information, See Dennis Crouch, *Does Size Matter? Counting Words in Patent Specifications*, PATENTLY-O (Dec. 20, 2007) online at:

<http://www.patentlyo.com/patent/2007/12/does-size-matte.html>.



The above claim count chart shows the result of a study of 28,000 U.S. patents issued between January 1977 and December 2005. Each patent has at least one “independent claim” and may include additional “dependent claims.” Using a software algorithm, I counted the number of total claims and also independent claims for each patent. Because of the large sample size, I am very confident (99.9% CI) that the average number of both total claims and independent claims are increasing over time. The chart shows this result for total claims. The chart’s scale may mask the similar trend showing that independent claims have increased by almost 50% over the 28 year time period.

It is important to recognize that the above results are directed to issued claims. In most cases, patent applications originally include even more claims that are then cancelled during the examination process.

For further information, See Dennis Crouch, Rising Claim Counts, Patently-O (Dec. 23, 2007) at:

<http://www.patentlyo.com/patent/2007/12/rising-claim-co.html>.

# **ATTACHMENT 5**

# RESULTS OF POPA SURVEY ON FLAT GOAL PILOT PROGRAM

May 2006

1. Are you currently a non-probationary employee?<sup>1</sup>  
Yes: 70% No: 30%
2. Are you currently on the Increased Flexitime Program?  
Yes: 65% No: 35%
3. Do you work voluntary overtime to make production?  
Yes: 65% No: 35%
4. Do you work voluntary overtime to make awards?  
Yes: 36% No: 64%
5. Do you believe the Flat Goal Program will increase the number of counts that you need to do each biweek?  
Yes: 74% No: 26%
6. If you train junior examiners, what correlates most closely to the time you spend per biweek?<sup>2</sup>  
0-3 hrs: 43% 4-7 hrs: 28% 8-10 hrs: 16% 10-15 hrs: 8% >15 hrs: 7%
7. If you assign new cases in your art unit, what correlates most closely to the time you spend per biweek?<sup>2</sup>  
0-2 hrs: 40% 3-6 hrs: 31% 7-10 hrs: 14% >10 hrs: 15%
8. If you classify new cases in your art unit, what correlates most closely to the time you spend per biweek?<sup>2</sup>  
0-2 hrs: 32% 3-6 hrs: 34% 7-10 hrs: 22% >10 hrs: 13%
9. Do you earn Special Achievement Awards (SAAs)?  
Yes: 43% No: 57%
10. Do you earn Gainsharing Awards?  
Yes: 42% No: 58%
11. Do you work paid overtime?  
Yes: 41% No: 59%
12. Is the availability of awards or the availability of overtime more important to you?  
Awards: 13% Overtime: 24% Both: 48% Neither: 16%
13. Do you think you are over or under 80% examining time?  
Over: 36% Under: 44% Do Not Know: 21%
14. In view of the assumptions for the Flat Goal Plan for annual leave, do you think that you will be unable to use annual leave you earn? Yes: 72% No: 28%
15. In a year when no one in your family or yourself has a serious medical condition or birth or adoption of a child, how much sick leave do you use?  
0-7 days: 38% 8-26 days: 55% >26 days: 7%
16. Will you be volunteering for the Flat Goal Program? Yes: 5% No: 95%
17. Will you quit training, assigning, and/or classifying under the Flat Goal Program?  
Yes: 98% No: 2%

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<sup>1</sup> Percentages may not total 100% due to rounding.

<sup>2</sup> Based on responses, questions 6, 7 and 8 were ambiguous, i.e., responses suggest that those who did not train, assign cases or classify cases may have responded either under the 0-3 hours category or simply did not respond at all to one or more of these questions.