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# **UNITED STATES PATENT AND TRADEMARK OFFICE**

**PATENT**

**PUBLIC ADVISORY COMMITTEE**

**ANNUAL REPORT**

**DECEMBER 1, 2008**

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## **PATENT PUBLIC ADVISORY COMMITTEE**

### **ANNUAL REPORT**

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#### **I. INTRODUCTION**

The Patent Public Advisory Committee (“Committee” or “PPAC”) was created to advise Congress on the "policies, goals, performance, budget and user fees of the United States Patent and Trademark Office (“Office”) with respect to patents."<sup>1</sup> The Committee’s duties include the preparation of an annual report submitted to the Secretary of Commerce, the President, and the Committees on the Judiciary of the Senate and the House of Representatives.

This year, the Committee is focusing its report on three themes. These themes are as follows:

1. A scorecard on the Office’s actions relative to the 2007 PPAC report recommendations;
2. The critical issues currently facing the Office,
  - the need for a new comprehensive plan specifically directed to the pendency/backlog problem;
  - the problems in the Office of the Chief Information Officer that became evident in 2008;
  - the restatement of the need for a national workforce; and
  - the need for a process improvement practice in the Office; and
3. The general non-critical issues related to the policies, goals, performance, budget and users fees of the Office.

The Committee well understands the interdependent and complex nature of these issues and recognizes that it does not have all the answers.

None the less the Committee believes itself obligated to present recommendations to support positive trends, to reverse negative trends and to present a constructive path forward for the Office. The Committee’s first set of recommendations were made in the 2007 Report. This report thus seeks to identify the key issues, explain the consequences of inaction or maintaining the status quo, and provide solid concrete recommendations for both the Office and policy makers.

#### **II. 2007 PPAC REPORT RECOMMENDATIONS SCORECARD**

In its 2007 Annual Report the Committee made a number of recommendations that were specifically directed to the issues of patent quality and pendency which continue to be

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<sup>1</sup> See 35 U.S.C. §5(d).

some of the most significant issues facing the Office in 2008 as they were in 2007. In all the Committee made seventeen recommendations. These recommendations were made by the Committee with the express hope and understanding that the Office would act on them in an expeditious manner. While the Office has made some progress in addressing the 2007 recommendations it is the Committee's opinion that the overall action taken by the Office could have been more aggressive and thorough. To highlight the Office's actions on these recommendations and the Committee's current thoughts on these actions the Committee has prepared the following table or scorecard. The left hand column of this Table identifies the issue addressed by the recommendation and provides an abbreviated explanation of the 2007 recommendation with a reference to the page number on which the recommendation appears in the 2007 report The right hand column provides the reader with the USPTO's actions, in the Office's own words, relative to the recommendation and the Committee's proposals/response to the actions taken.

The scorecard starts on the next page.

## 2007 Recommendations Scorecard

| 2007 PPAC Recommendation   | 2008 actions taken/PPAC proposals   |
|--|---|
| <p>1. <u>Quality.</u><br/>Create a definition of what is meant by a “quality” patent –<br/>Page 2</p>  | <p><u>USPTO actions</u> - Patent community efforts continued, while Office relied on statutory requirements as indicia/measures of quality. In FY2009, the Office intends to work jointly with the public, recognizing the difficulties in achieving a “universal” definition of a “quality patent.”</p> <p><u>PPAC Proposal</u> – Since the definition of “quality” has ramifications on all aspects of the patent examination process and on public perceptions of the Offices work we propose that the Office provide the PPAC with such a definition by February 6<sup>th</sup>, 2009 for discussion at the Public Session of the next PPAC meeting. Quality application prosecution indicia and quantifiable metrics relating to search, examination and efficiency of office procedures when properly defined will be used by the Office to drive quality improvement efforts . Applicant quality issues should be identified and publicly discussed along with internal Office quality actions.</p>  |
| <p>2. <u>Quality.</u><br/>Adopt a unitary search system for all patents and non-patent documents – The use of a unitary search system that allows for Internet search engine-type queries across multiple patent and non-patent databases is essential for improved prior art search results. The Office should establish a “search system” blue ribbon panel in the second quarter Y2008 tasked with developing the requirements for such a unitary system. This panel should provide final recommendations for the Office by the fourth quarter of FY2008 and the system should be operational no later than the first quarter of FY2009. –<br/>Page 3</p> | <p><u>USPTO actions</u> - The Office, working with colleagues from other large patent offices, composed of China’s Patent Office (SIPO), the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Patent Office (KIPO), and the Office (collectively, the “IP5”), established 10 so-called “Foundation Projects” that will help patent examiners access the best and most relevant prior art. The Office is taking the international lead on identifying a common approach to sharing and document search strategies, as well as providing common access to search and examination results.</p> <p><u>PPAC Proposal</u> – The PPAC commends the Office for its international efforts on accessing prior art, but, this does not resolve the issue of the unitary search recommendation as discussed in the 2007 report. The Office has not created the “blue ribbon panel” in 2008 as suggested and no such system will be operational by first quarter FY2009. PPAC proposes that the Office develop a formal plan on the creation of a unitary search system by May 31<sup>st</sup>, 2009 for review at the Public Session on the June 27<sup>th</sup>, 2009 PPAC meeting.</p> |

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| <p>3. <u>Quality.</u><br/>         Establish patent-office database sharing – ... the Office should establish sharing agreements with ALL patent offices so that the Office examiners have access to ALL patent documents in the world. The issues of translation must be addressed by the Office as relevant prior art is published in many languages. The basis of trust in the system requires nothing less. - Page 3</p>  | <p><u>USPTO actions</u> - The EPO is taking the lead on the Foundation Project devoted to establishing a common documentation database.</p> <p><u>PPAC Proposal</u> – The PPAC welcomes these projects, but suggests that a timeline be developed for the piloting an implementation of said initiatives for review by the PPAC. Said timeline to be provided to the PPAC by May 31<sup>st</sup>, 2009 for review at the Public Session on the June 27<sup>th</sup>, 2009 meeting.</p>  |
| <p>4. <u>Quality.</u><br/>         Establish examiner knowledge management systems - the Office should develop a more robust system to ensure that it retains the institutional knowledge of its highly educated and skilled examination corps with regard to prior art references in and across technologies, including how these references relate to specific technologies. Such a system should enhance and facilitate remote learning and non-time zone based workforce collaboration as well as improving patent examination efficiencies. – Page 3</p>   | <p><u>USPTO actions</u> - The Office piloted a knowledge-management system in TC2100</p> <p><u>PPAC Proposal</u> – The PPAC understands that this pilot was ongoing when the recommendation was made last year, It is PPAC’s understanding that this was a limited pilot. The PPAC is very interested in the results of this pilot as well as the going forward plans for an Office wide program rollout. PPAC proposes that the Office provide a detailed written update to the pilot as well as the plans for further work on this initiative one week before the February 6<sup>th</sup>, 2009 meeting.</p>  |
| <p>5. <u>Quality.</u><br/>         Revision of information requirement rules - The Committee recommends that the Office consider different ways to revise the current information disclosure statement requirements (e.g., Rules 1.98 and 1.99) to ensure that in egregious situations where large numbers of items or items of substantial length are cited in an information disclosure statement, examiners have the ability to require an explanation of the relevance of the cited items. .... Finally, the Office should consider the ramifications of the Inequitable Conduct theory on any proposed rules. - Page 4</p> | <p><u>USPTO actions</u> - The White House set an early November 2008 deadline for publication of all final rules to be effective before the end of this Administration. The Office did not publish either the Information Disclosure Rules (IDS) or the Alternative Claims (A/C) final rules before this deadline.</p> <p><u>PPAC Proposal</u> – The PPAC understands that the Office did not publish the Information Disclosure Rules (IDS) or the Alternative Claims (A/C) final rules prior to the deadline. PPAC remains interested in the Offices plans pertaining to these issues. The PPAC proposes that the Office provide a written update to the Information Disclosure Rules (IDS) and the Alternative Claims (A/C) final rules one week before the February 6<sup>th</sup>, 2009 meeting. Alternatives to new ids rules that can provide incentives for applicants to conduct searches prior to filing should be explored</p> |

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| <p>6. <u>Quality &amp; Pendency</u><br/>Encourage pre-examination interviews - ... we recommend that the Office rewrite Section 713.02 of the Manual of Patent Examining Procedure (MPEP) (“Interviews Prior to First Official Action”) to promote and encourage interviews, noting that in almost all cases the examiner should find that “an interview would advance prosecution of the application.” See MPEP Section 713.02. Conversely, applicant practice of seeking an interview before first action should be encouraged by the Office where the applicant believes an interview would advance prosecution.- Page 5</p> | <p><u>USPTO actions</u> - The Office piloted pre-1<sup>st</sup>-Action interviews. The Office must negotiate with the Patent Office Professionals Association (POPA) before it can permanently offer this flexibility to the public. However, 1<sup>st</sup>-action interviews are available for those applications using Accelerated Examination. The Office amended the Manual of Patent Examining Procedure (MPEP) to encourage interviews generally</p> <p><u>PPAC Proposal</u> – The PPAC commends the Offices actions on this recommendation and requests that the Office provide a written update to this initiative one week prior to the Feb 6<sup>th</sup>, 2009 meeting, highlighting the lessons learned from the pilot and making further recommendations on extending this recommendation to examiners and to all cases. The PPAC also wishes to understand POPA’s issues with a full rollout of this program. To this end PPAC invites POPA to send PPAC a written description of its concerns related to this project one week prior to the Feb 6<sup>th</sup>, 2009 meeting. There is a solution space here, and PPAC is very interested in assisting the Office and POPA in resolving potential differences of opinion on this issue. PPAC is of the view that the Office and POPA need to review why more interviews are not occurring and what it can do to incent examiners to reach out to more applicants for early interviews.</p> |
| <p>7. <u>Quality &amp; Pendency.</u><br/>Developing a “highly complex application” definition – The Office should undertake a review of its applications to develop a practical definition for highly complex applications, and specifically including the concept of “technical complexity,” for use with a new fee structure to be recommended to Congress. – Page 5</p>  | <p><u>USPTO actions</u> - The Office primary effort in this regard involves additional charges for additional claims, to recover the cost of additional work involved. The Office is assessing international and internal labor-relations implications of introducing a “highly complex” definition for distinguishing applications – for fee purposes.</p> <p><u>PPAC Proposal</u> - The PPAC would respectfully submit that the Office should develop the requested definition as it would be of value to the patent community to understand the Offices perspective on what is a “highly complex” case by reason of technical issues, application length, etc so as to assist the Office in review of such cases. In addition, such a definition can drive Office behavior in examiner compensation/goals as well as informing Congress on the nature and scale of the issue if a fee change is appropriate. The PPAC would request that this study and definition be completed in by May 31<sup>st</sup>, 2009 and made available for PPAC review at the Public Session of the June 27<sup>th</sup>, 2009 meeting.</p>   |

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| <p>8. <u>Quality &amp; Pendency.</u><br/>Developing a “highly complex application” fee structure – The Office should develop a new fee structure that anticipates the real resource requirements necessary for properly examining the highly complex cases to ensure quality examination. For applications falling within this highly complex application fee structure, the Office should consider examiner workload balancing and an increased time for examination. - Page 6</p> | <p>See above</p>  |
| <p>9. <u>Quality &amp; Pendency.</u><br/>Retain Office Capability in the Face of Decreased Allowance Rates. – Page 6</p>  | <p><u>USPTO actions</u> - The Office is analyzing ramifications of current statutory approach whereby maintenance fees defray costs of (all) filing fees.</p> <p><u>PPAC Proposal</u> - The PPAC commends the Office for its work in FY2008 in ensuring that needed programs have been continued in face of decreasing budget resources.</p>  |
| <p>10. <u>Quality &amp; Pendency.</u><br/>Abolish antiquated duty station requirements – Currently all examiners participating in the off-campus “hoteling” program must report back to the Office campus in Alexandria, Virginia for at least 1 hour per week, at their own expense. This work rule severely limits the development of a nationwide workforce and must be abolished by any appropriate procedure. - Page 6</p>   | <p><u>USPTO actions</u> - The Office worked with the Government Services Administration (GSA), the Office of Personnel Management (OPM), and with members of Congress and the public in support of legislation that would allow the Office to pilot a new, cost-effective approach to a Nationwide Workforce (NWW) model. The Office will continue this effort in FY2009.</p> <p><u>PPAC Proposal</u> – The PPAC believes that this issue must be resolved quickly and that a nationwide workforce is critical to improved quality and pendency and to employee satisfaction, retention and hiring. This issue is addressed in greater detail in the body of this Report</p>  |
| <p>11. <u>Quality &amp; Pendency.</u><br/>Extend Hoteling –The Committee is of the view that the Office must continue to pursue hoteling and other telework flexibilities for any qualified member of the patent examination corps that wishes to participate. - Page 7</p>   | <p><u>USPTO actions</u> - The Office aggressively extended hoteling, adding 500 more employees to its existing program including non-examiner employees, such as Technical Support Staff. (The Office’s Trademark Assistance Center was nationally recognized in 2008 as the only Federal call center that permits employee telework.)</p> <p><u>PPAC Proposal</u> – The PPAC commends the Office for its efforts in this area and the recognition it has received for these efforts. However, the Committee feels that a full Office wide program for this type of work flexibility is essential to hiring and retaining the most qualified and motivated workforce and requests a quarterly update on the progress the Office is making in achieving this goal.</p> |



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| <p>12. <u>Quality &amp; Pendency.</u><br/>         Establish virtual regional offices -<br/>         We recommend that meaningful study of this issue take place in FY2008, with a conclusion and recommendation at the end of the fiscal year. - Page 7</p>   | <p><u>USUSPTO actions</u> - The Office was asked to study the issue of virtual regional offices. The Office undertook an analysis of establishing “brick and mortar” offices and concluded that the fiscally prudent approach emphasized the need for a nationwide workforce. Thus the USUSPTO has focused on implementing NWW in such a way that Office employees still feel connected, mission-oriented, and are given the developmental support they deserve.</p> <p><u>PPAC Proposal</u> – The Committee understands that the Office has studied the issue of duplicate offices and made a decision to drop any plans for a duplicate office. However, the USPTO’s study and resulting decisions were inadequately shared with PPAC. The PPAC was more interested in a study of the potential to use regional “work centers” to augment the national workforce. The PPAC therefore requests that the Office initiate a study of regional “work centers” (vs. duplicate USPTO offices) and provide recommendations for review with the Committee at the Public Session on the August 7<sup>th</sup>, 2009 meeting</p> |
| <p>13. <u>Quality &amp; Pendency.</u><br/>         Initiate university partnerships - the Committee recommends that the Office partner with specific universities in a pilot program that offers loans to qualified engineering students willing to become examiners, where the loans are forgivable in specified annual increments on successive anniversaries of the examiner’s employment with Office. - Page 8</p> | <p><u>USPTO actions</u> - The Office was very active in working with universities, particularly to develop IP-related curricula in law schools, business schools, and at the undergraduate level. In addition, Office representatives visited over 100 universities to conduct on-campus interviews and education sessions.</p> <p><u>PPAC Proposal</u> – The PPAC commends the university outreach efforts of the Office in FY2008. However, the Committee notes that its recommendation went beyond just outreach and would be interested in discussing the loan program in the Public Session of the February 6<sup>th</sup>, 2009 meeting.</p>   |
| <p>14. <u>Quality &amp; Pendency.</u><br/>         Expand Workforce Flexibilities - The Committee therefore recommends that the Office continue its path of expanding workforce flexibilities specifically to ensure a place for these seasoned professionals in its workforce. -Page 8</p>  | <p><u>USPTO actions</u> - The Office already offers maximum flexibility with work hours, the ability to hotel, the use of laptops for those who don’t want to hotel but want to do overtime from home, as well as offering the Federal government’s generous health, life-insurance, transit-subsidy and other benefits. The Office was successful in attracting many 2<sup>nd</sup> and 3<sup>rd</sup> career employees to patent examination, and noted that the number of new patent examiners with law degrees rose significantly. The Office’s website provides potential employees with 24/7 access to information about life as a patent examiners, as well as the ability to apply for a job on-line.</p> <p><u>PPAC Proposal</u> – The PPAC commends the Office for its work in this area and would be interested in understanding the percent of the 2<sup>nd</sup> and 3<sup>rd</sup> career employees as well as those with law degrees in the current workforce.</p>  |

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| <p>15. <u>Pendency.</u><br/> “Special Pay” for Patent Examiners – ... we urge the Office of Personnel Management to approve annual requests from the Office to provide the cost of-living differential to patent examiners, as meritorious and necessary to ensure a vibrant patent system. - Page 8</p> | <p><u>USPTO actions</u> - The Office requested a “special pay” increase for Patent Examiners, which was granted by OPM<br/> <u>PPAC Proposal</u> – The PPAC commends the Office for this action and is appreciative of the Offices efforts in reducing examiner attrition. We note that the Office drove patent examiner attrition (less internal transfers and retirements) to 7.83% in FY2008, through a combination of recruitment and retention incentives, telework options, and other workplace flexibilities. The PPAC understands that this is an ongoing issue that should be addressed quarterly.</p>   |
| <p>16. <u>Pendency.</u><br/> Exploration of a market-based examination model – Therefore the Committee recommends that the Office develop an exploratory, data driven, market based examination model for evaluation, taking fully into account the needs of the public and third parties. - Page 10</p> | <p><u>USPTO actions</u> - The Office realized that it needs an economist with significant expertise with market-based examination models and who can provide meaningful options. Therefore, the Office identified a new position – Chief Economist – and established a new unit – the Office of the Chief Economist. As required, because this effort is a re-programming, the Office worked with OPM and send a re-programming request to Congress.</p> <p><u>PPAC Proposal</u> – The PPAC commends the Office for creating the new office of the Chief Economist. The Committee is still interested in an exploration of the market-based examination model as a way to ensure that the public’s needs are being addressed in a timely manner. To this end the Committee requests that the Office provide an update at the Public Session of the February 6<sup>th</sup>, 2009 meeting on its plans for exploring such an approach to examination.</p>  |
| <p>17. <u>Pendency.</u><br/> Gaining increased workload efficiency - The Committee recommends that Office set a goal of achieving full utilization of foreign prior art searches, and expanded IPC search capability within six months of the date of this report. - Page 11</p>                         | <p><u>USPTO actions</u> - Office expanded its network of Patent Prosecution Highways, which provide significant benefits in qualifying applications in terms of faster processing times, fewer actions per disposal, and double the normal Office allowance rate. The Office also continued to work with its Trilateral partners (EPO and JPO) as well as with its IP5 partners to identify and attempt to quantify workload efficiencies. As mentioned above, the 10 IP5 Foundation Projects include a goal of achieving full utilization of foreign prior art searches and expanded International Patent Classification (IPC) search capability. The Office also undertook a significant PCT-examination effort, which eliminated its PCT backlog. The Office also improved its timely transmission of PCT search reports to WIPO (approximately 60% in 2008, as compared with 2-4% in 2007).</p> <p><u>PPAC Proposal</u> – The Committee commends the Office for the Patent Prosecution Highway and the Foundation Projects. The Committee would like to review this program in the 2009 meetings.</p> |

### III. CRITICAL ISSUES

In addition to fully following the 2007 recommendations set forth above, the Committee believes that there are four critical issues that should be addressed in this report, these are:

- the need for a new comprehensive plan specifically directed to the pendency/backlog problem;
- the problems in the Office of the Chief Information Officer that became evident in 2008;
- the restatement of the need for a national workforce; and
- the need for a process improvement practice in the Office.

#### 1. A new pendency reduction plan required:

The pendency/backlog has been growing for over a decade and in the Committee's opinion has reached truly unacceptable levels in 2008. The Committee realizes that the Office has faced numerous difficulties in reducing this problem, including budget diversion in earlier years, and that it has taken dramatic steps to improve the situation, such as the hiring of 1,200 new examiners in the last three years. The hiring increase has placed significant pressures on the Office's resources budget, plant and equipment as well as on skilled personnel. While the Committee believes that the Office has done a spectacular job in hiring the new examiners and developing and implementing the training academy, the hoped-for objectives of this increased hiring and improved training have not yet been achieved. The Committee firmly believes that conquering the pendency/backlog problem will not be achieved unless and until the Office makes a very public commitment to reducing average pendency across all applications to 24 months within the next 24 months. Only the Office is in the position to understand all of the actions that can be taken to achieve 24 month pendency for all applications over the next 24 months, but strongly encourages the Office to consider ALL available options to achieve this goal. The Committee also desires that the Office to commit to a longer range (3 year) plan and timeline to drive to an ultimate pendency goal of 18 months from filing to final disposition of the application including all counterpart continuing applications.

To accomplish this, the Committee recommends the following:

- That the Office prepares a new comprehensive set of plans for achieving a total pendency period as set forth above and make such plans available to the Committee by March 31<sup>st</sup>, 2009 for discussion at the Public Session of the PPAC meeting on June 27, 2009. This plan must set forth a number of different scenarios with differing resource requirements for achieving the pendency reductions. In the Committee's opinion the Office must take into considerations ALL options even those that do and do not require rule, statutory and budgetary changes. As with any such plan all of these proposed solutions must be clearly

supported by the assumptions that are being made, the dependencies that are evident and the ramifications on the Office and the patent system as a whole. [Note; the current PTO definition of pendency is from the time the application is filed until that application is allowed, appealed or abandoned. Since an increased number of applications are being re-filed, after a final office action or during appeal, typically as a RCE continuation application, and since that continuing application becomes assigned to an examiner and re-examined again, the backlog and overall pendency of the invention is not captured by the current definition. While an objective of obtaining a specific time period for pendency under the existing definition would be a significant improvement, the overall goal needs to be broadened. A broader pendency definition should be from initial filing of the application to ultimate disposition within 24 months, where final disposition means where no further action by the examiner is required such as when the case is finally allowed, appealed or abandoned with no re-filing.]

- Further, the Committee recommends that the Office start publishing the pendency numbers (for both the current definition and the “new” definition set forth above) for each Technology Center to the public by the end of March 2009.
- Since there has been a dramatic rise in the filing of continuing applications and these continuing applications add to the examination backlog and further increase the overall pendency of initially filed application, PPAC suggests that the Office analyze and propose changes, for discussion at the Feb 6, 2009 PPAC meeting, that the Office can take, such as for example concerning review of final office action and appeal practices and examiner performance metrics, to reduce the need for continuing applications in the absence of new rules.

## **2. Attention for the IT infrastructure:**

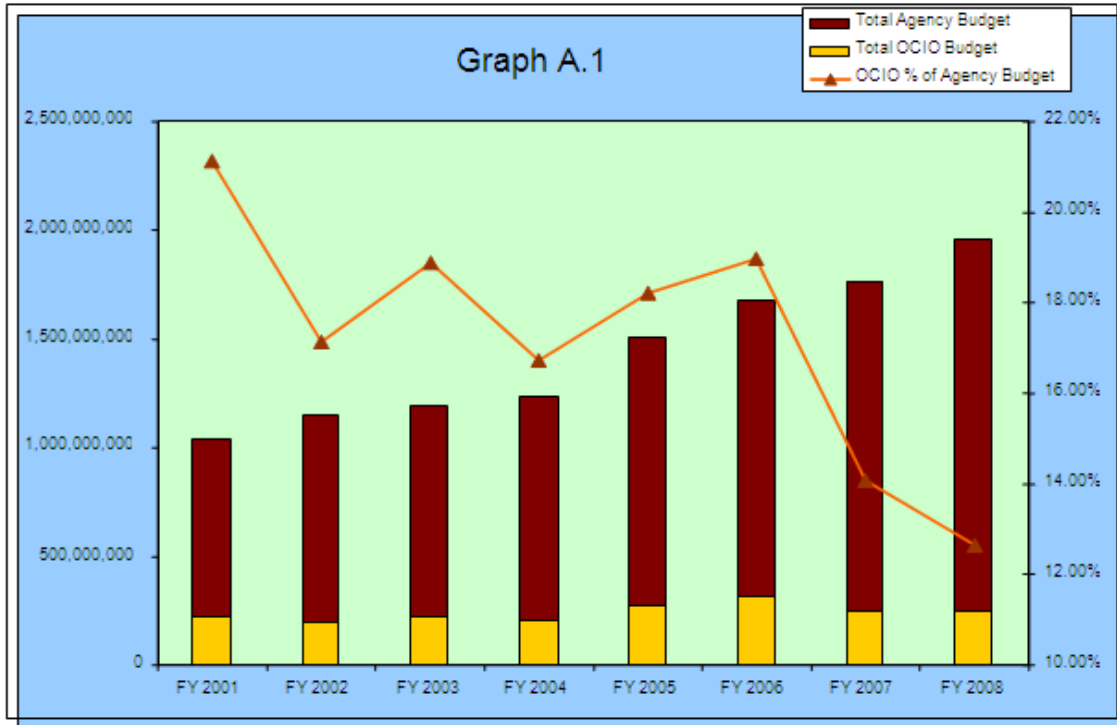
A confluence of factors, including shortfalls in funding, absence of a clear long-term strategy and IT policy have combined in 2008 to put the IT infrastructure at the Office in dire need of attention. Secondary effects, such as skill-set deficits, platform proliferation and system aging have had an amplifying effect on the situation. Combined, these render the IT infrastructure below industry standards for system age, performance and availability – putting performance and in some instances data and its timely recovery in jeopardy.

The Office is aware of these IT issues and, in April 2008 developed a strategic plan, the OCIO Road-Map, to address them. For this we do commend the Office. In fact, with the advent of partial funding at the end of FY 2008, a number of Road-Map initiatives have already gotten underway. These include a Unix/Oracle migration effort, an enterprise configuration management initiative as well as kicking off the disaster recovery effort to ensure all Office data is adequately protected.

Over the past eight years, the OCIO budget has remained roughly flat, while the overall budget for the Office has nearly doubled over the same period of time. The result is that the OCIO budget has fallen from on the order of 21% of the total Office budget in 2001

to less than 13% (\$178M) of the total Office budget in 2008. This suggests that the mission critical nature of the IT infrastructure has not been fully appreciated in establishing funding priorities for the Office, nor by extension has its role in realizing other Office mission goals been fully comprehended.

Funding trends are clearly visible below in Graph A.1.



Clearly funding levels at the OCIO have not kept pace with the significant increases in demand on the IT infrastructure. Further, scarce funds are expended on less than optimal basis on maintenance of burdensome older systems rather than on securing newer and more efficient replacement systems.

The issue is manifested in two categories: (1) hardware and software platforms and (2) human capital and organizational challenges.

Hardware and Software Platform concerns: The hardware and software platform concerns are related to deficiencies in system aging, platform proliferation, system loading, automated monitoring & diagnostics, and disaster recovery.

*System aging* - The Office has a number of key services running on hardware servers and software systems that are well beyond normal industry life-span of five years. For example, PIRS (Patent Image Retrieval System) which houses the images referenced by both EAST and WEST was installed in 1998, and continues to run on the original equipment installation. System aging presents not an isolated problem on a few systems, but more of a pandemic situation where across the USPTO. Of the roughly 1557

hardware servers at the USPTO, 1079 servers (69%) exceed five years in age (see Table B.1 below:

| <b>PTO Server Aging Profile</b> |                |                   |
|---------------------------------|----------------|-------------------|
| Table B.1                       |                |                   |
| <b>Age</b>                      | <b>Servers</b> | <b>Percentage</b> |
| 5 Years                         | 580            | 37%               |
| 6 Years                         | 342            | 22%               |
| 7 Years                         | 101            | 6%                |
| 8-10 Years                      | 56             | 4%                |

Systems with this age profile introduce myriad sources of infrastructure overhead and vulnerabilities – both to level of service and security.

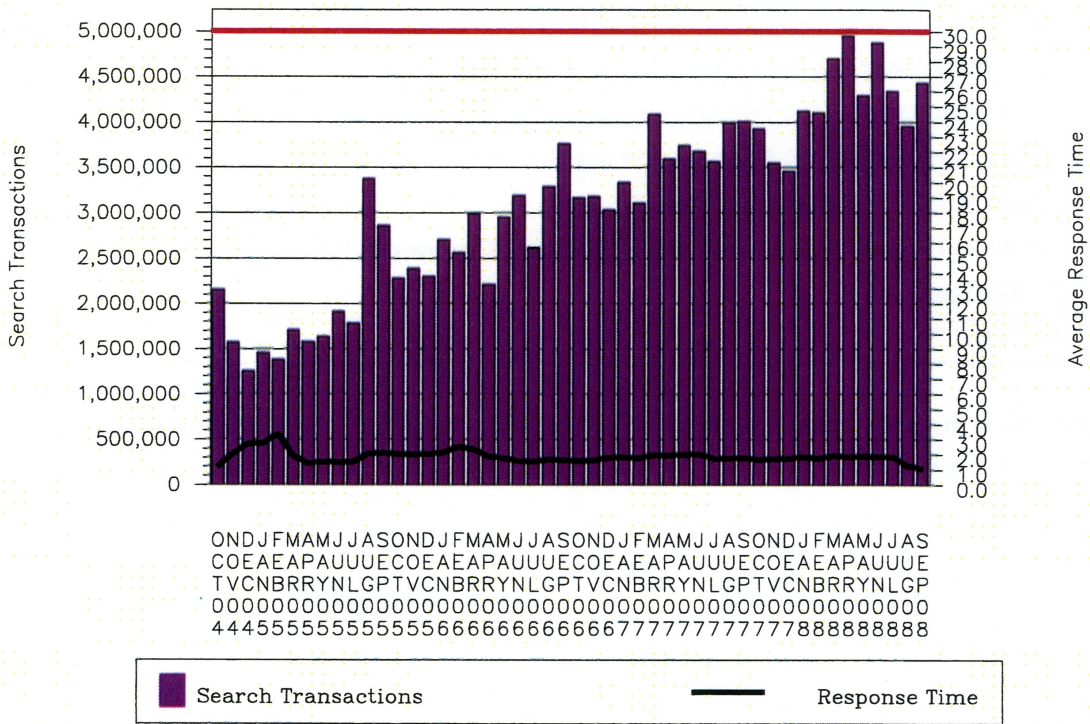
*Platform proliferation* - Over the past eight years, the Office has seen a proliferation in both hardware and software systems. Each different hardware platform (and variation) as well as each different software (e.g. Unix/Windows) platform (and versions) often has its own unique support and interface requirements. The OCIO estimates that there are on the order of 5,000 different desktop configurations (in an organization with only 9000 people in total), which suggests that there are insufficient configuration guidelines and/or compliance mechanisms in place. In addition, maintaining such a variegated environment also poses interoperability challenges which may even preclude introducing new, or more efficient solutions for reasons of maintaining "backward compatibility".

Further, much of the code running at the Office was generated with inconsistent methodologies and uneven use of best practice coding and documentation – which impacts both run-time for the applications in normal use, but also makes maintenance/debugging more difficult and time consuming.

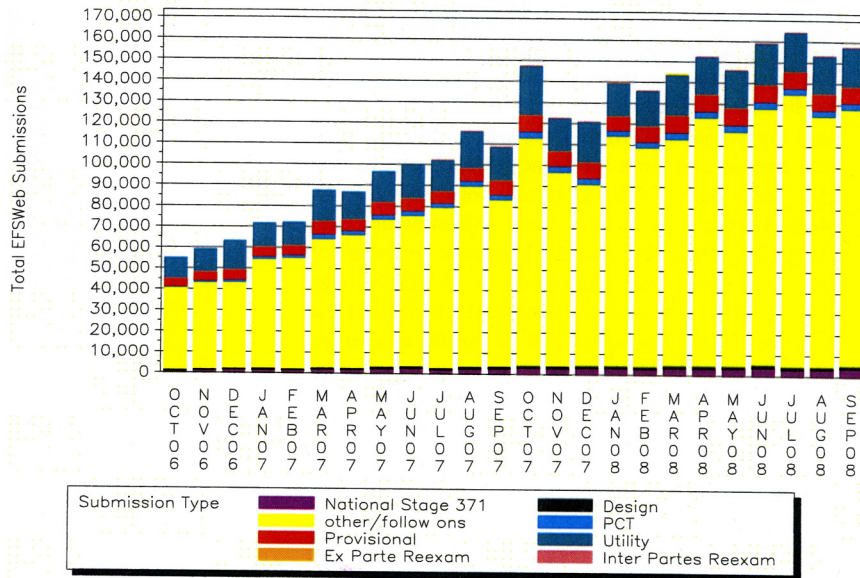
*System loading* - In addition to the aforementioned issues, the burden on these older systems is made worse by an increasing load placed upon them each year. For example, the year-over-year activity increases in 2008 for some key systems at the Office include:

| <b>2008 Year-Over-Year Load Increases For Select Systems</b> |                       |                     |
|--|-----------------------|---------------------|
| Table B.2  |                       |                     |
| <b>System</b>  | <b>Y-O-Y Increase</b> | <b>Load Doubles</b> |
| EFS Web (Submissions)  | 72%                   | < 3 Years           |
| EAST (Search Transactions)                                   | 19%                   | 5 Years             |
| IFW (Pages Loaded)   | 15%                   | 6 Years             |

Graph A.2 illustrates increased internal use of EAST over time. In addition to internal use of Office IT infrastructure several Office initiatives have encouraged and increased external use of the same IT resources, for example, Graph A.3 shows significant increases in usage of EFS-Web for filing of applications (a year-over-year increase of 72% this year).



Graph A.2



Graph A.3

At growth rates such as these the load on the system doubles quickly, and in far less time than it has been since the Capital Improvement Plan was last approved (eight years ago).

*Automated monitoring & diagnostics* - The Office does not currently have in place tools that would provide for the automated monitoring and diagnostics of its systems that would greatly aid in identifying and further obviating the sources of system downtime, but also better forecast demand for scheduling and strategic planning purposes.

*Disaster recovery* - The Office has insufficient disaster recovery capability to protect its information assets. A robust disaster recovery program is a necessity.

Human capital and organizational challenges: Any successful IT program has at its core a well-trained, well-coordinated and stable complement of practitioners. The Office finds its IT human capital challenged on all three of those fronts.

*Headcount & turnover* - Total headcount at the OCIO has been downward trending since 2001 at the same time the demands on the IT infrastructure have been rising. In 2001, the OCIO had a complement of 494, and in 2008 has only 457 on board (a 7.5% decrease). In addition, the OCIO has a turnover rate of 12%, hiring 130 new people over the past two years. Both of these trends add to the difficulty in rising to the workload and training challenges of the Office.

*Skill-base*: In an already challenging IT environment, the Office is further challenged in its ability to maintain a well-skilled workforce. In order to remain current and be able to assist with modern hardware and software solutions, an IT workforce needs to be provided with and participate in a robust training schedule so as to stay up-to-date. Without an appropriate priority and resources assigned to such training, skills gaps widen over time until such time that employees become handicapped in their ability to contribute at a significant level. This leads to an increased reliance on contractors to provide the needed skills.

*Contractor reliance*: In the short-term contractors can provide a stop-gap solutions, but long-term heavy reliance on contractors can mask symptoms of a larger skills short-fall, and if not properly managed create myriad ad hoc solutions – which often succeed in perpetuating contractor reliance as they are the only ones capable of maintaining the solutions. Further, as contractors are rarely a cost-effective solution, even more of the scare funding is consumed externally, with largely short-term benefit to show for it.

To help ensure that these issues are resolved the Committee makes the following recommendations:

- that the Management Counsel continue its support of the initiative, and that the plan continue to be fully funded and followed through its full term;
- that the Office explore how to reduce pre-processing and post-processing of data exchanged with the public, and used internally (*e.g.* submissions in XML, unitary search and full-text search capability of all application) to increase examination efficiency and reduce contractor costs for such simple tasks as PDF to text conversions;



- that the Office explore employing leading edge technologies to enhance the productivity of its workforce. Among these would be the use of Natural Language search/analytic tools, as well as other Sense-Making technologies currently available in the broader commercial market. Such tools could be used not only in examination, but could provide pre-examination filtering to sort out defective applications prior to wasting precious examine time. The OCIO has in fact already made some initial explorations of capabilities here that may be of value and should provide a report back to the Committee on these explorations by mid 2009.

### **3. Restating the need for a Nationwide Work Force.**

The Committee continues to believe that a geographically diverse work force is a key enabler of the twin goals of attracting a larger pool of qualified applicants to the examiner corps, and enhancing the chance of retaining for an entire career those who accept the position. Committee members have been privately pressing for this reform since 2006 with the Office's management and the Committee made public these concerns in its 2007 Annual Report. In that report the Committee made two specific recommendations to speed the creation of a nationwide work force: abolish antiquated duty station requirements and establish virtual regional offices. *Neither of these objectives has been achieved, and the Committee sees very little evidence that suggests they will be achieved in the 2009 fiscal year.* In the Committee's view, rolling over the stated goal of achieving a nationwide work force into another year is unacceptable.

As was noted in the 2007 Annual Report, the regulations governing the relationship of examiners to the Office require each examiner physically to appear at his or her assigned duty station at least one day per week. The expense of that travel must be borne by the hoteling examiner, and the Office gives no "travel hours allowance" that operates as a credit against the number of hours an examiner must otherwise work. Both the travel expense and time demands operate as a *de facto* bar on the widespread adoption of hoteling by any examiner who wants to live beyond a reasonable commuting distance from Alexandria, VA. The number of such examiners who participate in the program is vanishingly small.<sup>2</sup>

The Committee recommended in its 2007 Annual Report that this duty station requirement be "abolished by any appropriate procedure." Despite this recommendation, the requirement survived through 2008 and will live on into 2009. During Fiscal 2008, the Committee discussed this issue on numerous occasions with both Office management and employee Unions (POPA and NTEU), wondering why solutions cannot be found. Why, for example, can the Office not simply abolish the duty station rule by its own fiat? Better still, why can the Office not simply change an examiner's duty station to any place in the nation where the examiner chooses to live?

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<sup>2</sup> The Committee notes that 52 examiners have chosen to base themselves outside this commuting distance, and have been bearing the financial and time penalties incurred in reaching the Office one day per week.

The answer to the first question is that the designation of a “duty station” is a requirement for all federal employees, as the location of that duty station defines the “locality pay” for an employee. While the “locality pay” for Office employees is nationwide, the requirement for a specified duty station remains. The answer to the second question is that the Office can indeed change an examiner’s duty station to any locale it chooses. Changing the assigned duty station of an examiner from Alexandria to some remote locale would solve the problem of the duty station reporting requirements as the examiner would be operating from that new duty station on a daily basis. However, that change introduces other complexities that have defied resolution for the last two years.

Applicable regulations mandate that the Office pay all travel costs incurred by an employee from her assigned duty station to the home office for any mandated visits. In addition, regulations require that the Office offer an hour-for-hour credit for any such travel time to be used against any assigned work hours. The Committee appreciates the uncertainty that would ensue under the present regulatory scheme if the Office immediately opened up distant hoteling opportunities for all examiners. The impossibility of ascertaining just how many examiners would avail themselves of this opportunity is evident, as is the impossibility of guessing to what far flung places these examiners would move. Shouldering the enhanced financial burden of this increased travel could strain a stretched budget. Willingly accepting the lost productivity for this travel time would be at odds with severe pressures to bring pendency back into acceptable limits.

To solve these problems, in FY 2008 the Office threw its support behind telework legislation<sup>3</sup> that would modify the existing regulatory scheme that has so far frustrated all attempts at achieving an effective, nationwide work force. The legislation would permit the Office to submit to Government Services Administration (“GSA”) a proposal for a 6-year demonstration pilot with the goal of reducing reporting requirements back to the Alexandria campus. Under the proposal, an employee could choose to live anywhere in the United States in exchange for a willingness to return, on a limited basis, to Alexandria at his or her own expense.

In discussions between the Office and employee Unions concerning this legislation, the Office agreed to define:

- the frequency of and conditions justifying the mandatory return to Alexandria;
- the minimum amount of notice before requiring a teleworker to report to Alexandria;

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<sup>3</sup> S. 1000, The Telework Enhancement Act of 2007, was marked up on November 14, 2007 by the Senate Homeland Security and Government Affairs Committee. During the mark up, an amendment was offered by Senators Daniel Akaka and Ted Stevens that would allow GSA to grant agencies the ability to test flexibilities within the travel regulations through October 2014. H.R. 4106, the Telework Improvements Act of 2007, passed the House on June 3, 2008. The GSA test program language, contained within S. 1000, was not in H.R. 4106. Unfortunately, because of time constraints and political reasons, S. 1000 never came to the Senate floor.

- work-schedule requirements to ensure flexibility and accommodate the various time zones in the United States.

Negotiations around each of these areas of concern progressed during FY 2008. For example, the Office agreed to limit the number of mandatory trips from a remote duty station to Alexandria to no more than four per year. This is possible in part because of the wider availability of computer based training (“CBT”) that would eliminate travel requirements for essential training that had previously required face-to-face meetings. More importantly, the Office agreed to limit the conditions under which the Office or a Supervisor could require such return trips to a specified list, but the details of those conditions are still subject to negotiations between the Office and the Unions. The Committee understands that one of the Unions has so far refused to concede that examiners choosing to avail themselves of a remote duty station must pay for any expenses at all, or that they should not be credited for travel time.<sup>4</sup>

The Committee is of the view that a solution space must be found, and be found quickly, despite the difficulty of the issues and the competing concerns. The Committee thus recommends that the Office and the Unions place this issue among their highest priorities and look for a concrete resolution before the next PPAC meeting in March 2009. The issues are known, and the evidence for and against each point is readily available. Indeed, the solutions themselves are known. Reaching a solution will require compromise on the part of the Unions and perhaps additional compromise on the part of the Office. However, the absence of a negotiated solution will delay the introduction of legislation necessary to change the existing regulatory scheme. That delay will place significant obstacles in the way of any near-term accomplishment of the stated goals of the nationwide work force noted above.<sup>5</sup>

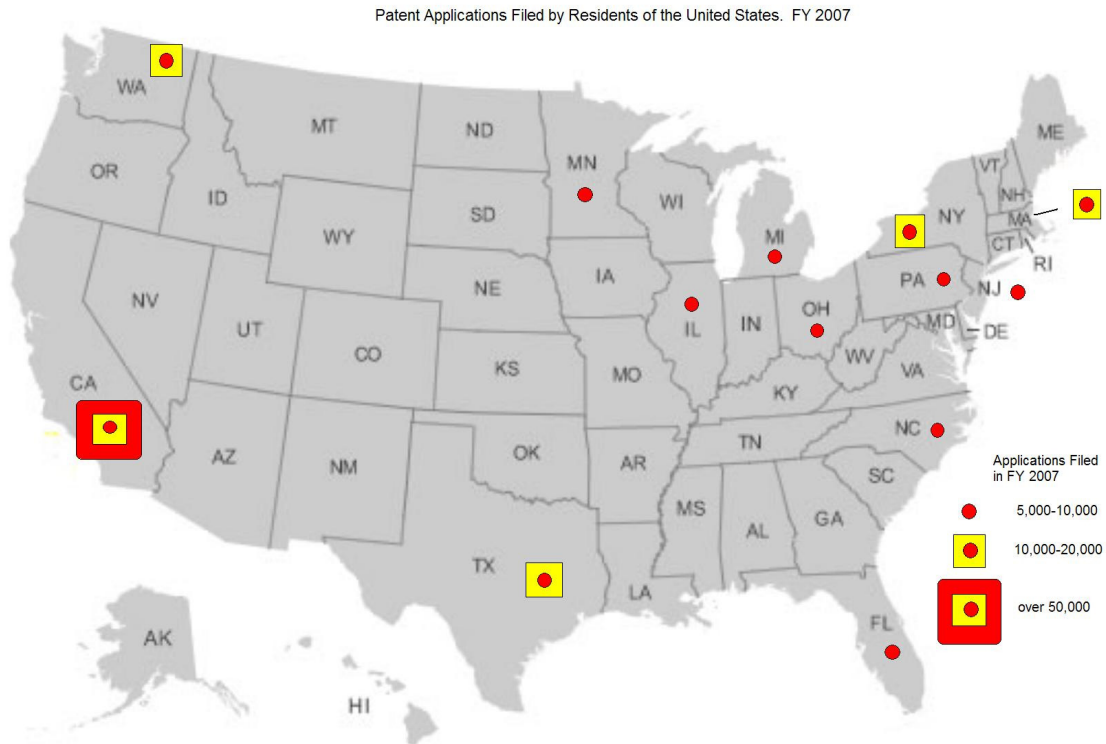
No more studies; no more tentative steps. It is time to get the job done.<sup>6</sup>

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<sup>4</sup> The Committee understands that NTEU 245 was a supporter of the telework legislation referenced in note 3, *supra*.

<sup>5</sup> Because the regulatory scheme that impacts the Office and its employees also impacts other Federal agencies and work forces, even complete agreement between the Office and the Unions will not necessarily bring an immediate resolution to the issue of a nationwide work force. However, agreement here is at least an effective starting point for consensus beyond the Office.

<sup>6</sup> On the question of extending the hoteling program, the Committee notes that the Office added 400 more patent examiners to its existing program and including non-examiner employees, such as Technical Support Staff. This increased participation has been on the part of personnel within a daily commuting distance and has had no impact on the creation of a nationwide work force.



This map shows areas of concentration for patent applications filed with the USPTO in FY 2007. It is clear to the Committee that not all of the applications are filed within the duty stations around the Office and that a nationwide workforce with examiners in Silicon Valley, New York and other clearly obvious technology centers would benefit US innovators across our nation.

#### 4. The need for a process improvement practice in the Office:

The OCIO issues discussed above as well as internal discussions by the Committee has convinced the Committee that the Office processes are in need of review and improvement. The Office in FY 2008 appears to have come to the same consensus when it established the Chief Process Improvement Office (CPIO). This new Office is to develop and implement a comprehensive strategy to undertake and ensure continuous process improvement throughout the Agency, instead of the past more ad hoc improvement process. The CPIO is a significant indication of the Office's commitment to reviewing, analyzing, standardizing, and improving its myriad processes. The Committee is aware that the establishment involved a significant internal education program among business unit heads and managers, so that the CPIO will be understood and valued. Additionally, Committee also understands that the creation of CPIO involved many levels of approval through the executive branch and notification of the oversight committees. While acknowledging that advance, what must come next is a robust commitment to implement the purpose of the CPIO. The Office leadership must ensure the CPIO is able to design and direct activities, beyond just cataloging efforts underway. Many process improvement programs fail because resources are not deployed strategically, and instead are directed so as to avoid "threatening" or "destabilizing" a core process; that approach is wrongheaded. The Office must empower the CPIO and the

supporting business unit liaisons to prioritize the most essential processes. Additionally, their efforts must embed continuous improvement metrics and review processes (e.g., change control protocols). This is distinct from many of the initial efforts, which involve process-mapping, and have not yet advanced to continuous-review.

A critical review of the examination process, and the corporate processes that support examination is a basic strategy of addressing the backlog. Without ensuring the process is efficient, the Office will run the risk of over-hiring, purchasing unnecessary equipment, instituting practice changes that cannot be incorporated without impacting quality negatively. This improvement process should also focus on the quality of initial actions, pendency reduction through internal procedural efficiencies and incorporate feedback mechanisms based on subsequent invalidity determinations by the Boards of appeal and courts

The Committee recommends that:

- the Office map the examination process within each Technology Center (TC), and then determine if any variations discovered are based-upon the underlying technology, if not, the processes should be standardized. (The technology centers are not meant to be “examination laboratories” where varied practices develop as a matter of differing cultures. Such differences inhibit many values: the ability to move managers among the TC’s, transparency of process for the user-community and oversight bodies, efficient deployment of new procedures and/or quality metrics, and ease of harmonization of practice with other offices.); and
- the Office be prepared to discuss the findings and recommendations of the CPIO at its February 6<sup>th</sup> meetings in 2009.
- The Office consider adopting international or industrial standards for its process improvements, as to the specific type of program, such as ISO or Six Sigma, etc. that Committee does not offer any advise, but leaves it up to the Office to determine the best type of program for its needs.

#### **IV. GENERAL NON-CRITICAL ISSUES RELATED TO POLICIES, GOALS, PERFORMANCE, BUDGET AND USERS FEES OF THE USPTO**

##### **1. Budget:**

FY 2008 review: The President's Budget for FY 2008 requested \$1.915 billion for the Office, an amount equal to the Office's projected user fee collections. Congress approved the President's request and appropriated \$1.915 billion, which represented an increase from FY 2007’s appropriation level of \$1.771 billion.

At certain points during the year, the Office revises its user fee collection estimates based on applicant and other activity (such as issue fees). In the summer of 2007, the Office revised its patent fee collection estimates for FY 2008 by \$70 million due in part to declining allowance rate and in return, issue fee collections. The Agency adjusted

spending plans accordingly through a process of spending reductions including a 50% hiring freeze on all non-examiner vacancies, a 10% across the board reduction to travel, the absorption of within-grade increase costs through delayed backfill hiring, and several targeted non-compensation reductions. The end of year fee collections ultimately were only \$36 million less than projected which allowed the Office to fully fund retention and recruitment bonuses, continue its PCT outsourcing efforts and allocate more resources to improving its IT infrastructure.

The following chart illustrates the actual Office obligations and expenditures for FY 2008 by business area.

| <b>BUSINESS AREA</b>                          | <b>FY 2008 (\$ in 000s)</b> |
|---|-----------------------------|
| Appeals Boards                                | 32,798                      |
| General Counsel                               | 11,665                      |
| Director's Office, External Affairs, CFO, CAO | 79,056                      |
| Patents                                       | 1,152,472                   |
| Trademarks                                    | 91,235                      |
| CIO   | 257,444                     |
| MGE   | 227,099                     |
| Reimbursable Agreements                       | <u>773</u>                  |
| <b>Total</b>                                  | <b>\$1,852,541</b>          |

FY 2009 budget: The Office's FY 2009 budget request is \$2,075 billion, which represents a \$159 million increase over the FY 2008 level. This request would provide \$1,828 million to the Patent business line for completing 445,200 first actions on patentability determinations and 400,200 patent application disposals (equaling 422,700 units of production); and \$247 million to the Trademark business line for completing 439,500 first actions on trademark applications and 345,200 office disposals. The corresponding user fee collection estimates for FY 2009 of \$1,828 million for patents and \$247 million for trademarks assumes the fee structure based on the provisions of Title VIII in the Consolidated Appropriations Act, 2005 (Pub. L. No. 108-447) will be continued in FY 2009 by the necessary appropriation language.

The bulk of the Office's budget each year is geared toward three broad responsibilities:

- Providing high quality and timely examination of patent and trademark applications,
- Guiding domestic and international IP policy, and
- Delivering IP information and education worldwide.

In particular, resources requested in FY 2009 will be used again to fund additional patent examiners. In addition, resources will be used to continue the implementation of e-

Government to more efficiently process patent applications; competitively source the classification and reclassification functions; continue retention incentives to retain a highly qualified and productive workforce; and increase patent workforce telework participation through expansion of the patent "hoteling" program.

Diversion: FY 2008 marked the 4<sup>th</sup> consecutive year that the Administration proposed a "no diversion" budget for the Office meaning that the Office was appropriated and had access to the money it projected collecting through user fees. However, even if Congress authorizes \$2 billion in Office spending based on projected \$2 billion in user fee collections, if the Office happens to collect \$2.03 billion by the end of the fiscal year (and it's very hard to project precisely with hundreds of fees adding to \$2 billion of fee collections), then \$30 million is "unintentionally" diverted and the Office does not have access to that \$30 million in fee collections to cover operational and other expenses.

According to Office's audited financial statements from FY 1992 to FY 2004, a total of \$749 million of USPTO fee collections were not available to the Agency and spent on other federal government programs. This "diversion" of Office user fee collections, combined with a steady increase of application filings, led to a significant backlog of applications awaiting examination and the IT infrastructure deficit discussed above.

Last year, the Committee strongly recommended the adoption of legislation to 1) permanently end the diversion of user fees for non-Office expenditures; 2) give Office authority to set and adjust patent fees and 3) establish in the U.S. Treasury of a revolving fund to be known as the "United States Patent and Trademark Office Public Enterprise Fund" which would deposit all collected Office fees into the fund to be available without FY limitation until expended.

The Committee renews these recommendations. In order for the Office to operate effectively, it needs to have full access to the fees it collects. This will ensure the Office's ability to continue to recover the actual costs of operations and other related expenses designed at enhancing the quality and efficiency of its outputs and services and provide full IT modernization which is critically required. With the greater budget certainty that comes with retention of all user fee collections, the Office would be better positioned to successfully recruit, hire, train, and retain its growing workforce; a workforce that is necessary to tackle the workload of the Office. Greater long term budget certainty will also ensure continuation of new and enhanced processing and electronic filing programs; expansion of teleworking to a national level; and other quality and efficiency-based initiatives.

The Committee notes that in its FY 2008 appropriations bill covering the Office, Congress provided the Office the authority to access, until expended at any point in the future, up to \$100 million in fee collections in excess of the appropriation of \$1.915 billion. This addresses the issue of "unintentional diversion." As noted above, the Office actually collected less than \$1.915 billion it projected for FY 2008 so this provision did not need to be invoked. However, the Committee applauds Congress for the inclusion of this provision and urges Congress to make it permanent per the Committee's

recommendation to establish in the U.S. Treasury of a revolving fund to be known as the "United States Patent and Trademark Office Public Enterprise Fund."

Future Budgets and Fees: As noted above, the Office collected \$36 million less in FY 2008 than originally estimated. The Office made some necessary spending adjustments to come in line with the lower fee collections. However, the Office remains concerned about future fee collections due to the current economy and a lower allowance rate. The patent allowance rate was above 60% as recently as 2004; it has since decreased below 50% and was at 44% for FY 2008. In addition to the yearly decline in the collection issuance fees associated with the granting of patents, the Office is beginning to be effected by declining maintenance fees due to the gradual decline in the number of patents issued. This is likely to have a significant impact on Office budgets in the near future.

There is tremendous cost associated with the massive hiring of new patent examiners in the form of salaries, recruitment and retention bonuses, training, and recruitment/HR costs. This hiring effort seems to be nearly unanimously supported by the private sector. Furthermore, the Office is seeking to increase production by outsourcing Patent Cooperation Treaty (PCT) and reclassification work, better training, and more telework options for examiners. Expensive IT maintenance is also needed to support end to end electronic filing and processing of patent applications and enhanced telework and training efforts. All of this, of course, requires careful budget planning and funding.

The Committee understands the Office is crafting a package of increased regulatory fees to offset projected near term budget shortfalls and recover the actual costs of these activities. Higher regulatory fees may be necessary but the reality, as the Committee pointed out in its report last year, is that the Office's fee structure is 25 years old. Currently, its most important fees are set by statute, so that many fees are out of alignment with costs. Accordingly, the current fee schedule is the result of a patchwork approach that is not cost-based and has led to a large imbalance of fees, nearly 300 in total, that need reform and realignment.

Last year, the Committee urged Congress to work with the Office to pass legislation authorizing the Office to set and adjust patent filing and processing fees and to assure the Office has full access to its fee collections while maintaining appropriate Congressional oversight. Such legislation was not passed.

The Committee recognizes that virtually everyone interested in the U.S. patent system supports the twin goals of increased quality and reduced pendency at the Office. A well and appropriately funded Office is necessary to accomplish these goals. The Committee will support a collaborative effort in 2009 between the private sector, the Administration and Congress to reach agreement on Office funding priorities and an appropriate fee structure for the next decade to support such priorities.











































