U.S. DEPARTMENT OF COMMERCE
Office of Inspector General

U.S. PATENT AND TRADEMARK OFFICE

Patent Examiner Hiring Process Should be Improved

Final Inspection Report No. BTD-14432-2-0001/March 2002

PUBLIC RELEASE

Office of Audits, Business and Trade Division

UNITED STATES DEPARTMENT OF COMMERCE
The Inspector General
Washington, D.C. 20230

March 29, 2002

MEMORANDUM FOR: James E. Rogan
Under Secretary of Commerce for Intellectual Property and
Director of the U.S. Patent and Trademark Office

FROM: Johnnie E. Frazier

SUBJECT: Patent Examiner Hiring Process Should Be Improved
Final Audit Report No. BTD-14432-2-0001

This is our final report on our audit of patent examiner attrition for USPTO's Patent Examination Corps. The purpose of our audit was to determine whether attrition might be reduced through improved hiring or retention practices. The recruitment and retention of patent examiners is crucial to the needs of the Patent Operations if that office is to be successful in meeting the demands imposed by the American Inventors Protection Act of 1999. Equally important is the fact that USPTO incurs considerable expense in training new employees and acclimating them to the patent examination process.

Patent examiner attrition rates varied widely over the last decade. From 14.7 percent in fiscal year 1990, rates fell to 6.8 percent in fiscal year 1993, then rose steadily over the next seven years to 13.4 percent in fiscal year 2000. Of particular concern was the number of examiners who left during their first three years of employment. For example, 56 percent of the attritions between fiscal year 1990 and fiscal year 2000 occurred during the examiners' first three years. Thirty percent of the examiners who left during this period had worked at USPTO for less than one year. The attrition rate for patent examiners fell to 8.2 percent in fiscal year 2001, attributable, in part, to the slowdown in the U.S. economy, and the special pay rate, which was effective June 1, 2001.

Although a USPTO Patent Attrition/Retention Study issued in August 2000 notes that some attrition is the result of terminations or resignations for unsatisfactory performance, it also cites other reasons why former examiners left PTO, including job dissatisfaction and higher paying opportunities. During our review, we interviewed former patent examiners and reviewed employee records for examiners that left USPTO during fiscal years 2000 and 2001 and found that job dissatisfaction, poor performance, and higher pay continue to be the primary reasons why patent examiners leave USPTO. For those examiners that expressed dissatisfaction with their jobs as patent examiners, the primary reasons given were pressures to meet performance requirements and the lack of variety in their work. Several former patent examiners expressed concern that production requirements or job requirements were never adequately explained during pre-employment interviews.

USPTO officials have taken a number of actions to identify and remove impediments to patent examiner retention. Retention initiatives include higher pay, flexible duty hours, recruitment bonuses, and law school and technical training assistance. In addition, other initiatives identified by USPTO, once fully implemented, should serve to further stem patent examiner attrition. They include instituting a telecommuting program and taking greater efforts to match new hires' previous work experiences and educational background to the work assigned. Although attrition attributed to examiners leaving for higher pay, for example, can vary with changes in economic conditions, there remain opportunities to further reduce attrition resulting from the nature of the work and terminations resulting from poor performance. Therefore, we are recommending additional ideas that should further enhance PTO efforts to recruit and retain patent examiners (see page 7).

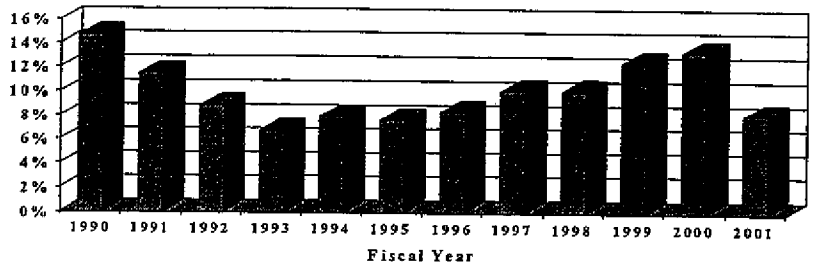
In his written response to the draft report, the Under Secretary of Commerce for Intellectual Property and Director of the USPTO advised that he accepts the recommendations and will, given the appropriate resources, implement the necessary changes.

INTRODUCTION

USPTO's mission is to promote industrial and technological progress in the United States, to strengthen the national economy by administering the laws relating to patents and trademarks, and to advise the Administration on patent, trademark, and copyright protection, as well as the trade-related aspects of intellectual property. In the last decade of the twentieth century, USPTO experienced substantial growth in patent application filings: moderate growth from 1990 to 1996 and even higher growth rates from 1997 to 2000. Patent applications grew by one-third between fiscal years 1990 and 1997, and grew by another third during the next three fiscal years. USPTO received 293,244 patent applications in fiscal year 2000, a 12.3 percent increase over fiscal year 1999. For fiscal year 2001, patent applications increased another 11 percent to approximately 325,335, and are expected to increase by another 11 percent in fiscal year 2002.

As the number of patent application filings increased over the last decade, USPTO increased its examining staffs. However, high attrition rates in certain technology centers were a significant concern for USPTO officials. The attrition rate for patent examiners, which was at a high of 14.7 percent in fiscal year 1990, fell to a low of 6.8 percent in fiscal year 1993, and then began to rise steadily over the next seven years. Recruitment and retention of patent examiners continued to be a problem in fiscal year 2000, with the attrition rate increasing to 13.4 percent. The attrition rate for patent examiners fell to 8.2 percent in fiscal year 2001. (see Figure 1).

Figure 1
Rate of Patent Examiner Attrition
FY 1990-2001



Source: USPTO

USPTO officials suggest that the higher attrition rates in 1999 and 2000 may have been attributable to hiring in 1998 and 1999. They advised that during these two fiscal years, the USPTO hired 728 and 799 patent examiners, respectively—more that 3.5 times the annual average of 208 hired during the prior seven fiscal years. They indicated that this increase resulted in an expedited hiring process with a lower percentage of quality candidates, a situation that might help explain the increased attrition in 1999 and 2000.

As for the declining attrition rate in 2001, USPTO officials suggest that this may have been the result of the fact that many examiners, aware of the possibility of a pay raise in January 2001, remained at the USPTO to see the outcome of its request. The special pay rate was approved and became effective June 1, 2001. The attrition rate for fiscal year 2002, according to USPTO officials, has been reduced to approximately 6.8 percent.

OBJECTIVES, SCOPE, AND METHODOLOGY

The purpose of our audit was to determine whether attrition rates at USPTO might be reduced through improved hiring or retention practices. Our review covered patent examiner attrition actions for fiscal years 2000 and 2001 (through June 30). We interviewed officials in USPTO's Office of Human Resources and former patent examiners from two technology centers. We selected Technology Center 1600 (Biotechnology and Organic Chemistry) because its attrition rate was the lowest of the technology centers in fiscal year 2000, and Technology Center 3700 (Mechanical Engineering, Manufacturing, Products, and Designs) because its attrition rate was among

the highest. A random sample of 50 former patent examiners was selected from among the 148 that left these two technology centers during fiscal years 2000 and 2001 (through June 30). We were able to locate and interview 34 of the 50 former patent examiners in our sample: 14 from Technology Center 1600 and 20 from Technology Center 3700. We also reviewed applicable regulations, policies, procedures, and practices, and examined documentation provided by USPTO officials, management studies, and prior reports. We did not assess the reliability of computer-generated data because such data were not relevant to our review.

Our review was conducted in accordance with generally accepted government auditing standards and was performed under the authority of the Inspector General Act of 1978, as amended, and Department Organization Order 10-13, dated May 22, 1980, as amended. Our review was conducted during June through October 2001 at USPTO's headquarters in Crystal City, Virginia.

FINDINGS AND RECOMMENDATIONS

USPTO faces a number of challenges regarding patent examiner hiring and retention. The agency's ability to attract qualified candidates is reportedly hampered by (1) a shortage of potential examiners with knowledge of engineering, computer science, and law as a basic foundation for successfully performing the job; (2) competition from private industry (high-technology companies, law firms, etc.) for a limited pool of resources (engineering, computer science, biotechnology, and physics majors); (3) inability to meet compensation packages being offered by private industry (i.e., higher base salaries, profit sharing, optional packages of benefits, higher incentive bonuses, etc.); and (4) competition from other federal agencies.

In addition, we were told that USPTO's ability to retain highly skilled and qualified patent professionals is hampered by job pressures, including the need to meet production standards and supervisory requirements, and salary caps imposed under Title 5 of the Code of Federal Regulations.

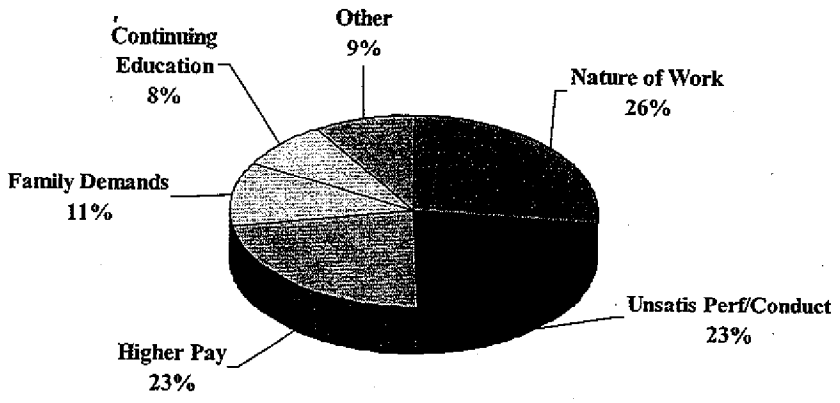
Better retention of patent examiners is essential if Patent Operations is going to be successful in meeting the demands of the American Inventors Protection Act of 1999. For patent applications, the Act provides that a commensurate adjustment will be made to patent terms in instances where (1) "first office actions" were not issued within 14 months of patent filing, or (2) a patent is not issued within 36 months of the patent filing. The Act also provides that (1) patent terms will be adjusted when USPTO's response to an applicant's reply to a rejection or appeal is not mailed within four months of receipt of the reply, (2) when action is not taken on an application within four months of a decision of the Board of Patent Appeals and Interferences or the Federal Courts, or (3) when a patent is issued more than four months after payment of the patent issue fee.

Why Patent Examiners Leave USPTO

In FY 2000, USPTO commissioned a study to better understand why it continues to lose examiners. Among other observations, the study notes the following six primary reasons for examiner attrition (see figure 2):

1. Nature of work – dissatisfaction with the job because it was too production oriented and/or there was insufficient flexibility in the work.
2. Unsatisfactory performance or conduct – terminations or resignations resulting from the examiners' poor performance or conduct.
3. Higher pay – resignations resulting from examiners leaving for higher paying jobs in the private sector.
4. Family demands – spouse moving, family illness, or examiner didn't like the Washington area.
5. Continuing education – returning to school, usually law school.
6. Other – any explanation other than those listed above.

Figure 2:
Former Patent Examiners ' Reasons for Leaving



Source: USPTO FY 2000 Study

The nature of the work (that is, dissatisfaction with the job) was most often cited as the reason for patent examiners leaving, followed by unsatisfactory performance or conduct, and higher pay. To determine if these reasons for leaving were still valid, we selected a random sample of 50 former patent examiners from among the 148 that left Technology Center 1600 and Technology Center 3700 during fiscal years 2000 and 2001 (through June 30). Of those 50, we were able to locate and interview 34. The results of our

interviews were similar to results of USPTO's more extensive study. In most cases, the interviewees indicated they left for higher pay or because of job dissatisfaction. Most often cited as the basis for the former patent examiners job dissatisfaction were productivity requirements and a lack of variety in the work performed. But, more importantly, our interviews provided some insight that should be useful as USPTO officials and managers continue to deal with their issues of recruiting and retention. Specifically, USPTO should:

- Be very candid and direct with applicants regarding what the work entails, before they are hired.

- Deal with the difficult reality that some applicants, who appear qualified on paper for the job, are, in fact, not suited at all for the production-oriented type or work that the patent process entails.

During our interviews with some of the former patent examiners, they expressed concern that neither productivity requirements nor job requirements were adequately explained to them during their pre-employment interviews. As one former patent examiner complained, "I had no idea what I was getting myself into." Another former examiner said, "There was simply too much pressure to meet goals and not sufficient time to do a thorough search." Another former examiner said, "The job offered little variety. You were expected to become an expert in one area, which offered no variety at all." Still, another former examiner said, "I just didn't enjoy what I was doing." He said that the production requirements were not explained to him during his pre-employment interview, thus he had no idea what was expected of him prior to accepting the job.

The reality is that the nature of patent examination work is difficult, often repetitive, and always time sensitive. While many may see this work as a challenge, and even an opportunity, others may see it very differently. It is not unusual for many recruiters to inherently try to put the best face on a job, especially when they are going after someone whom they perceive as a "good" candidate. But, (1) given the high monetary costs associated with the training and orientation of new examiners and (2) the increased "pendency costs" associated with having to reassign pending cases to other examiners when examiners leave, the importance of finding not only good candidates but finding a good match is surely in USPTO's best interest.

Departures by Newly Hired Patent Examiners

Of particular concern is the number of newly hired patent examiners that leave. Fifty-six percent of the attritions between fiscal years 1990 and 2000 occurred during the examiners' first three years. Thirty percent of the examiners who left had less than one year's experience, 17 percent had less than two years' experience, and 9 percent had less than three years' experience. More specifically, of the 375 patent examiners that left USPTO in fiscal year 1999, 51 percent left during their first year of employment. For those examiners that left Technology Center 1600 and Technology Center 3700 in fiscal

years 2000 and 2001 (through June 30), 33 percent left during their first year of employment, another 22 percent left with less than two years of experience.

Based on comments made to us by former patent examiners during interviews and the number of terminations of patent examiners during their first year of employment, we believe a significant number of these departures can be attributed to USPTO's not fully explaining job requirements to candidates during pre-employment interviews.

The loss of these relatively new employees within such a short period of time is particularly troubling because of USPTO's sizable investment in training new employees. Newly hired patent examiners go through an extensive orientation program to get acclimated to the patent examination process.

OIG Conclusions

It is important to highlight that USPTO officials have taken a series of initiatives to address the many challenges USPTO faces in attracting and retaining patent examiners. For example, USPTO has requested and received authority from the Office of Personnel Management for special salary rates for patent examiners. USPTO has also implemented numerous family friendly programs, such as flexible duty hours, to encourage patent examiners to stay. A pilot program for telecommuting is also being evaluated. USPTO officials acknowledge that this alternative, along with a number of others, has been discussed and will be given further consideration if sufficient staffing is not available to meet mounting backlogs of patent applications. USPTO officials have further advised that they now have a dedicated, well trained recruitment team to attend all recruitment events; hiring officials have been trained to improve their interview procedures; an enhanced advertising campaign has been put in place; and reference and background checks are completed prior to the hire date.

Although patent examiner attrition fell to 8.2 percent in fiscal year 2001, we believe that the number of examiners leaving because of dissatisfaction with the job or unsatisfactory performance can be further reduced.

Patent examination requires individuals with a variety of unique skills, particularly technical expertise in such areas as engineering, computer science, and law. However, some individuals with these degrees may not be particularly suited for the production-oriented work environment or the lack of variety in the work that awaits them at USPTO. We believe that USPTO can further improve its overall recruiting process by (1) developing techniques that better identify applicants not suited for the production-oriented patent examination process and (2) fully informing applicants about the nature of USPTO's work environment.

Recommendations

We recommend that the Under Secretary of Commerce for Intellectual Property and Director of the U.S. Patent and Trademark Office ensure that the Commissioner of Patents, in

coordination with the Chief Financial Officer, reexamine its recruiting process to determine whether (1) recruiting techniques can be developed to better identify those applicants most suited, and those not suited, for the patent examination process and (2) better inform patent examiner applicants about the nature of USPTO's production-oriented work environment.

Under Secretary for Intellectual Property and Director of the USPTO Response and OIG Comments

In response to recommendation No. 1, *reexamine the recruiting process to determine whether recruiting techniques can be developed to better identify those applicants most suited, and those not suited, for the patent examination process*, the Director advised that USPTO also recognizes the need to better identify, during the interviewing process, those applicants most suited to the job of patent examiner. The Director cited two initiatives in place:

1. Development of a recruitment training class to train recruiters on effective interviewing techniques. The training is based upon the theory that the best predictor of future behavior is past behavior. The training is designed to put in place a consistent and effective interview process and show the interviewer how to ask questions that will most likely predict how a candidate will perform, and avoid asking inappropriate or non-productive questions.

2. Attendance by a patent representative to a briefing provided by OPM on the suite of competency-based human resource recruiting tools that OPM offers.

In response to recommendation No. 2, *reexamine the recruiting process to better inform patent examiner applicants about the nature of USPTO's production-oriented work environment*, the Director advised that USPTO recognizes the importance of making applicants aware of the work environment and cited three USPTO initiatives:

1. USPTO has incorporated into its recruitment literature reference to the production system.

2. Recruiters are trained on the importance of describing USPTO's expectations along with the independence, responsibility, and flexibility that such a system provides. The independence USPTO examiners enjoy allows them to take full advantage of USPTO's family-friendly work schedule options.

3. USPTO will continue to explore additional mechanisms that can be put in place to provide applicants with knowledge of the requirements of the examination job.

We commend the USPTO for the actions already taken in response to the two recommendations. USPTO's response is attached in its entirety.

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USPTO's response to the draft report expressed agreement with the recommendations and noted that, given the appropriate resources, USPTO plans to implement the necessary

changes. We have incorporated USPTO's comments into the final report, and the complete response is attached.

Please provide your action plan addressing the recommendations for our concurrence within 60 days of the date of this memorandum in accordance with Department Administrative Order (DAO) 213-5. The plan should be in the format of exhibit 7 of the DAO. Should you have any questions regarding preparation of the action plan, please contact me at (202) 482-4661, or have a member of your staff contact Michael Sears, Assistant Inspector General for Auditing at (202) 482-1934, within 10 days of receiving this report. We appreciate the cooperation and courtesies extended to us by USPTO officials during our review.

Attachment

ATTACHMENT

UNITED STATES
PATENT AND
TRADEMARK OFFICE

Under Secretary of Commerce For Intellectual Property and
Director of the United States Patent and Trademark Office
Washington, DC 20231
www.uspto.gov

MAR 29 2002

MEMORANDUM FOR Michael Sears
Acting Assistant Inspector General for Auditing

FROM: James E. Rogan
Under Secretary and Director

SUBJECT: Draft Response to Draft Audit Report No. BTD-14432:
"Patent Examiner Hiring Process Should Be Improved"

The Patent Business area appreciates the effort your auditing staff has made in evaluating our patent examiner hiring process. We have carefully considered the two recommendations made in the subject draft report for improving our recruiting process and find them appropriate. We accept these recommendations and will, given the appropriate resources, implement the necessary changes.

IG Recommendation (1): Reexamine the recruiting process to determine whether recruiting techniques can be developed to better identify those applicants most suited, and those not suited, for the patent examiner position.

USPTO Response:

The Patent Business area also recognizes the need to better identify, during the interviewing process, those applicants most suited to the job of a patent examiner. We have several initiatives already in place directed to this and will continue to expand our efforts in this area.

We have developed a training class to train our recruiters on effective interviewing techniques. The training is based upon the theory that the best predictor of future behavior is past behavior. The training is designed to put in place a consistent and effective interview process and show the interviewer how to ask questions that will most likely predict how a candidate will perform, and avoid asking inappropriate or non-productive questions.

We also had a patent representative attend a briefing provided by OPM on the suite of competency-based human resource recruiting tools they offer, and we are currently reviewing our options in this area.

IG Recommendation (2): Reexamine the recruiting process to better inform patent examiner applicants about the nature of USPTO's production-oriented work environment.

USPTO Response:

We, too, recognize the importance of making applicants aware of our work environment. We have incorporated into our recruitment literature reference to our production system. Our recruiters are trained on the importance of describing our expectations along with the independence, responsibility, and flexibility that such a system provides. The independence our examiners enjoy allows them to take full advantage of our family-friendly work schedule options. We will continue to explore additional mechanisms we can put in place to provide our applicants with knowledge of the requirements of the examination job prior to hiring them.

Again, thank you for the audit report. We intend to meet the recommendations in a diligent manner given the appropriate resources, and we will gratefully accept suggestions as we move forward to ensure that an effective recruitment process is in place that will enable us to hire and retain a skilled workforce to attain the needs of the Patent Business.