U.S. DEPARTMENT OF COMMERCE
Office of Inspector General

United States Patent and Trademark Office

USPTO Should Reassess How Examiner Goals, Performance Appraisal Plans, and The Award System Stimulate and Reward Examiner Production

Final Inspection Report No. IPE-15722/September 2004

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Office of Inspections and Program Evaluations

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

SEP 30 2004

MEMORANDUM FOR: Jon W. Dudas
Under Secretary of Commerce for Intellectual Property
and Director of the United States Patent and Trademark Office

FROM: Johnnie E. Frazier

SUBJECT: Final Report
United States Patent and Trademark Office: *USPTO Should Reassess How Examiner Goals, Performance Appraisal Plans, and the Award System Stimulate and Reward Examiner Production* (IPE-15722)

As a follow-up to our September 16, 2004, draft report, attached is the final report on our review of patent examiner production goals, performance appraisal plans, and awards, and a limited scope review of the trademark examination process and the potential to improve its productivity. A copy of your response to our draft report is included in its entirety as Appendix 6 of the report.

We are pleased to note that PTO has concurred with our three recommendations. Specifically, PTO will reassess the current patent examiner goals, performance appraisal plans, and award system, and their effectiveness in stimulating and rewarding examiner production, as well as their effectiveness in achieving the objectives of PTO's *21st Century Strategic Plan.* Please provide us with an action plan within 60 days that outlines the actions you have taken or plan to take to address our recommendations.

We thank PTO personnel for the assistance and courtesies they extended to us during our review. If you have any questions or comments about our report, please feel free to contact me on (202) 482-4661, or Jill Gross, Assistant Inspector General for Inspections and Program Evaluations, at (202) 482-2754.

Attachment

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EXECUTIVE SUMMARY

The United States Patent and Trademark Office (PTO) was established 200 years ago to promote technological progress. It encourages worldwide innovation and strengthens the U.S. economy by administering patent and trademark laws and advising the Secretary of Commerce and the President on patent, trademark, and copyright protection and trade-related aspects of intellectual property. Patent and trademark examination is a labor-intensive process: individual examiners determine the patentability of proposed innovations by comparing applicant claims with prior art (previous patents, databases, or journals) and existing inventions to determine whether the proposal is indeed new and warrants a patent. The Office of Inspector General conducted a review of PTO patent processes to determine the impact of production goals, performance awards, and appraisal plans on the output of the PTO staff that process patent applications—its patent examiner corps. We also conducted a limited scope review of the trademark examination process and the potential to improve its productivity.

As new technologies have emerged and established ones advanced, the number of patent applications has increased as well, further straining an already overburdened patent processing system. Patent application filings since 1998 have risen by 39 percent. In fiscal year 2003, PTO received 333,452 new applications, on top of the 362,612 applications already backlogged (see figure 2 on page 2).

> PTO's patent corps has 8 technology centers that process patents. Together, the centers have 271 art units, each with a staff of examiners that specializes in a unique technology, scientific method, or classification.

PTO has developed a blueprint for overhauling its patent and trademark processes to boost productivity, substantially reduce backlogged applications, and help ensure granted patents are of the highest quality. Its *21st Century Strategic Plan*, issued in June 2002 and revised in February 2003, proposes a variety of initiatives—including expanding automated processing (e-government), sharing search results with foreign patent offices, improving quality assurance, and outsourcing patent searches.

However, according to a recent Government Accountability Office report, initiatives similar to those in PTO's strategic plan could take years to implement. As a result, PTO recognizes that it must pursue improved productivity through available means and take immediate steps to enhance and maintain quality in the patent process, while working to implement the other initiatives of the strategic plan. At the same time, PTO and the OIG both recognize that revisions to performance plans, production goals, or incentive awards are, as appropriate, subject to negotiation with PTO's unions.

Our review focused on areas that offer opportunities for improvement in patent examiner production in the next few years as well as challenges for enhancing productivity in the following years. For example, we found that patent examiner production has been stagnant in fiscal years 2002 and 2003, and the number of examiners receiving performance awards dropped

significantly from fiscal year 2002 to 2003. Figure 1 summarizes the problems that we have identified with PTO's current patent examiner goals, appraisal plans, and performance awards. These issues highlight why we believe that PTO needs to reevaluate examiner goals, appraisal plans, and awards. Our specific findings follow.

Figure 1: Problems with Examiner Goals, Appraisal Plans, and Performance Awards

Examiner Production Goals
• Goals have not changed since 1976 to reflect efficiencies in work processes and improved technology (page 11).
• Most art units (95 percent) process applications in less time than allotted goals (page 11).
• Examiner goals are not adjusted as PTO's production requirements change (page 20).
• Examiner goals are not linked to supervisor and PTO goals (page 20).
Examiner Performance Appraisal Plans
• Plans are not linked to supervisor and PTO goals (page 20).
• Plans are not adjusted as PTO's production requirements change (page 20).
• Examiners are not rated on achievement of PTO's goals (page 20).
• Examiners receiving outstanding ratings in fiscal years 2001 and 2002 increased from 55% to 61%, while their production goal achievement declined (page 20).
Examiner Performance Awards
• Production award recipients decreased from 72% in 1999 to 61% in 2003 (page 24).
• Production awards did not improve production because production decreased from 113% and has remained at about 110% (page 11).
• No award is offered to encourage production between 110%-120% of production goal (page 24).

Source: Office of Inspector General

Patent Examiner Goals Have Not Changed Since 1976 to Better Reflect Efficiencies in Work Processes and Improved Technology. Overall, we found that examiner production goals have not been re-evaluated to reflect efficiencies in work processes and improved technology. Our review of fiscal year 1999-2003 production statistics reported by seven of PTO's eight patent technology centers revealed that all seven processed applications in less time than allotted.[1] Most current examiner production goals, which were developed in 1976, may be too easily obtainable because approximately 95 percent of the art units processed applications in less time than their allotted goals. According to PTO statistics, patent quality is improving and patent complexity is only gradually increasing. We were told by examiners that they could do more work, but that there is no additional incentive. (See page 11.)

Patent Examiner Performance Appraisal Plans Are Not Linked to Supervisor and PTO Goals. PTO and supervisory patent examiners are provided with specific production goals and the annual pendency goals as outlined in the American Inventors Protection Act of 1999. However, we found that examiner appraisal plans do not link individual performance to agency goals for reducing time to complete "first actions" and overall pendency. As a result, examiners explained to us that they can set their personal annual production goals according to the awards they want to receive rather than establishing those goals in a fashion that better supports the achievement of PTO's goals.

[1] PTO does not include Technology Center 2900—patents for design of articles of manufacture—in production statistics.

Conversely, PTO recently aligned its trademark goals with examiner goals by revising the GS-13 and GS-14 trademark attorney performance appraisal plans (see page 22). Hence, we believe that PTO should consider revising its patent performance appraisal plans to link them to agency production, first action and overall pendency goals, as well as measures of examiner's success at processing applications within specified time periods. (See page 20.)

Patent Examiner Award System Is Not Well Structured. PTO offers examiners three incentive awards—gain-sharing, special achievement, and the pendency reduction award—which are tied to examiners' production or workflow management. We found (1) the gain-sharing award offers little, if any, incentive to produce more than 110 percent of their assigned production goal—the minimum production level needed to qualify for a gain-sharing or special achievement award; (2) the special achievement award requires that examiners only achieve the same 110 percent average as the gain-sharing award, but over four consecutive quarters, rather than over the fiscal year; and (3) relatively few examiners have qualified for the pendency reduction award. Therefore, we recommend that PTO evaluate the current awards system and criteria, to determine if there is a more effective and efficient way to stimulate higher examiner production. (See page 24.)

On page 30, we have provided our recommendations to address our findings and conclusions.

PTO concurred with our three recommendations, agreeing to reassess the current patent examiner goals, performance appraisal plans, and award system, and their effectiveness in stimulating and rewarding examiner production, as well as their effectiveness in achieving the objectives of PTO's *21st Century Strategic Plan.*

BACKGROUND

The United States Patent and Trademark Office was established 200 years ago to promote technological progress. It encourages worldwide innovation and strengthens the U.S. economy by (1) administering the laws relating to patents and trademarks and (2) advising the Secretary of Commerce and the President on patent, trademark, and copyright protection and trade-related aspects of intellectual property.

Key PTO Statistics

2003

	Patents	Trademarks
Examiners	**3,579**	**239**
Applications Filed	**333,452**	**218,596**
Applications Granted	**173,072**	**143,424**
Backlog	**457,254**	**431,805**
First Actions	**283,111**	**276,568**
Final Disposals	**284,470**	**238,759**
Average Pendency	**26.7mos.**	**19.8 mos.**

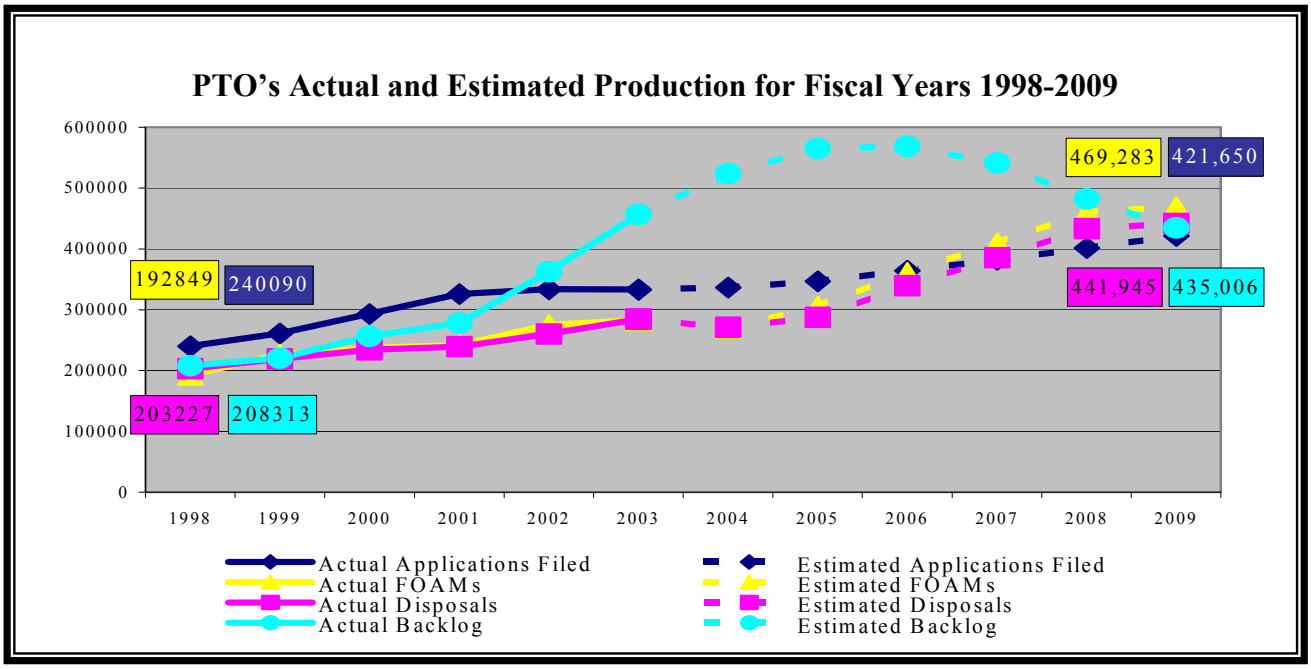
PTO's primary services are to grant patents and register trademarks. This report primarily focuses on patent examiner production. We also reviewed the performance appraisal plans for the trademark examiners.

Patent processing is handled by the Patent Business Group, which consists of three branches: (1) the Patent Corps, (2) Patent Examination Policy, and (3) Patent Resources and Planning. The Patent Corps operates eight technology centers (TC) staffed by directors, supervisory patent examiners (SPEs), patent examiners, and support personnel. Each center contains art units—or groups of examiners—that specialize in a unique technology, and are thus responsible for processing applications that fall within their area of expertise.

- TC 1600 – Biotechnology and Organic Chemistry
- TC 1700 – Chemical and Materials Engineering
- TC 2100 – Computer Architecture, Software, and Information Security
- TC 2600 – Communications
- TC 2800 – Semiconductors, Electrical and Optical Systems and Components
- TC 2900 – Designs for Articles of Manufacture
- TC 3600 – Transportation, Construction, Electronic Commerce, Agriculture, National Security and License and Review
- TC 3700 – Mechanical Engineering, Manufacturing and Products

Over the years, PTO has adjusted to meet new challenges with the pace of change in the sciences and technology, including the emergence of new technologies, advances in established ones, and a rise in the number of patent applications. The latter has been perhaps the greatest challenge. Patent application filings have risen by 39 percent since 1998. In 2003, PTO received 333,452 new applications, on top of the 362,612 already backlogged (see figure 2), and the average patent took some 26.7 months to process. PTO has two types of pendency: first action pendency and overall pendency (see page 3).

Figure 2. PTO's Actual and Estimated Production



Source: PTO Annual Reports and PTO management

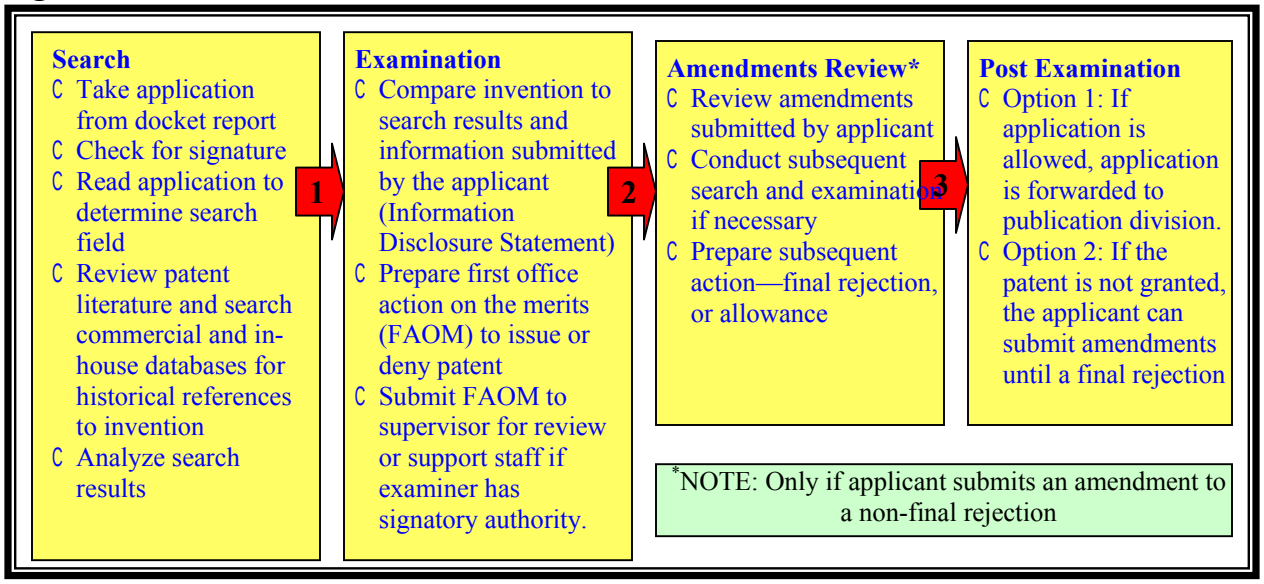
The Patent Examination Process

Patent examination is a labor-intensive process (see figure 3). However, the tools used by the examiners have substantially improved and help make the review process easier. Individual examiners determine the patentability of proposed innovations by comparing applicant claims with prior art (previous patents, databases, or journals) to determine whether the proposal is indeed patentable.

The office receives most applications in paper form (in fiscal year 2003, 1.3 percent were submitted electronically). Upon receipt, each paper application is scanned into an electronic record[2] and logged into the Patent Application Location and Monitoring (PALM) database. PALM organizes the applications into docket reports that are assigned to individual examiners, and then examiners process applications in the docket in most cases from the oldest filed to the most recent. However, according to examiner performance appraisal plans, they are only required to work on new cases that have (a) the oldest effective filing date and (b) the oldest actual filing date by the end of every other biweek period. Using PTO and commercial databases to search for prior art and existing technology, examiners determine the patentability of the proposed invention.

[2] PTO is implementing an electronic image processing system that should allow examiners to review and process applications online.

Figure 3: The Patent Examination Process



Source: Office of Inspector General

There are two major actions in the tenure of an application being processed: (1) first action on the merits (FAOM) is the examiner's initial opinion to allow, restrict, or reject the application; and (2) final disposal is the examiner's ultimate decision on the application's fate. PTO translates these two actions into cumulative annual measures of individual, technology center, and agency production, with first action pendency reflecting the average time in months from date of filing to an examiner's FAOM and total pendency equaling the average time in months from date of filing until PTO grants or the applicant abandons the application.[3]

As figure 4 indicates, patent corps disposals and total first office actions on the merits are rising, due to the hiring of more examiners, but not nearly enough to offset the growth of backlogged applications and new filings prior to fiscal year 2003. Specifically, PTO has hired 3,393 new patent examiners since 1998. After factoring in attrition, the size of the patent examiner corps has increased by 986—or 38 percent—from 1998 through 2003. During the same period, patent applications increased by almost 39 percent, patent disposals increased by 40 percent, and first office actions on the merits by 47 percent.

[3] PTO Fiscal Year 2002 Performance and Accountability Report.

Figure 4. PTO Production Statistics, Fiscal Years 1998 - 2003

PTO Statistics	1998	1999	2000	2001	2002	2003
Applications Filed	240090	261041	293244	326081	333688	333452
Growth in Applications Filed		8.7%	12.3%	11.2%	2.3%	-0.007%
First Office Action on the Merits (FAOM)	192849	226642	237421	241770	275055	283112
Growth in FAOMs		17.5%	4.7%	1.8%	13.7%	2.9%
Disposals	203227	219556	234344	239493	260245	284470
Growth in Disposals		8.0%	6.7%	2.1%	8.6%	9.3%
Backlog	208313	220700	256520	278303	362612	457254
Growth in Backlog		5.9%	16.2%	8.5%	30.3%	26.1%
First Action Pendency (months)	12.6	13.8	13.6	14.4	16.7	18.3
Total Pendency (months)	23.8	25.0	25.0	24.7	24.0	26.7
Number of Examiners	2593	2987	2904	3060	3538	3579

Source: PTO Annual Reports and PTO management

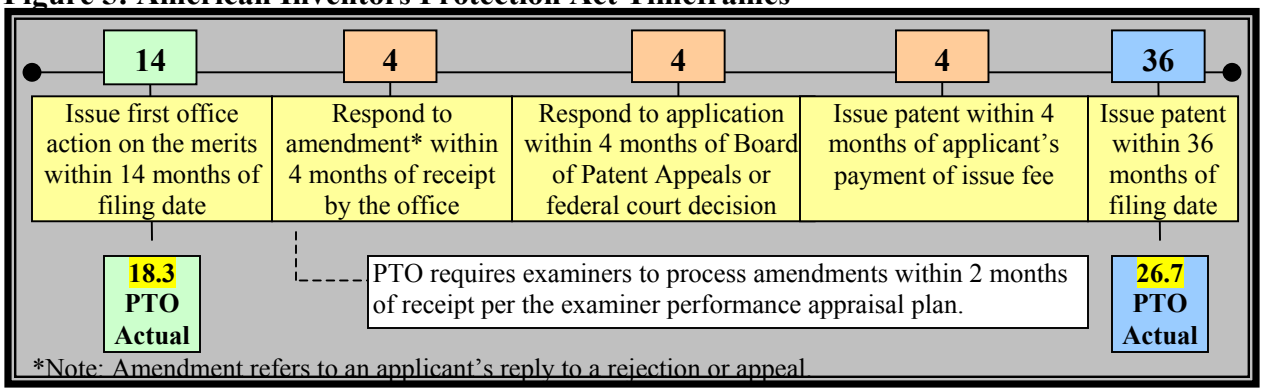
Production Goals

PTO's patent processing goals are dictated by the American Inventors Protection Act (AIPA) of 1999—which provides specific timeframes—and PTO requirements.

Congressional goals. The American Inventors Protection Act established timeframes within which PTO should complete each major step of the application review process and ultimately grant or deny a patent (see figure 5): examiners should (1) issue first actions within 14 months from an application's filing date; (2) respond to an applicant's reply to a rejection or appeal within 4 months of receiving the applicant's correspondence; (3) act on an application within 4 months of a decision by the Board of Patent Appeals and Interferences or the federal courts;[4] and (4) issue a patent within 4 months of receiving the applicant's issue fee. The act's fifth deadline is for an overall turnaround time of 36 months from the date of an application's filing to the date of the patent's issuance. If PTO does not meet each of these five deadlines, additional days are added to the applicant's 20-year patent term. If the applicant is not diligent in meeting his or her application responsibilities, the applicant does not receive additional days to the patent term.

[4] The Board of Patent Appeals and Interferences reviews adverse decisions of examiners and determines the priority and patentability of inventions.

Figure 5: American Inventors Protection Act Timeframes



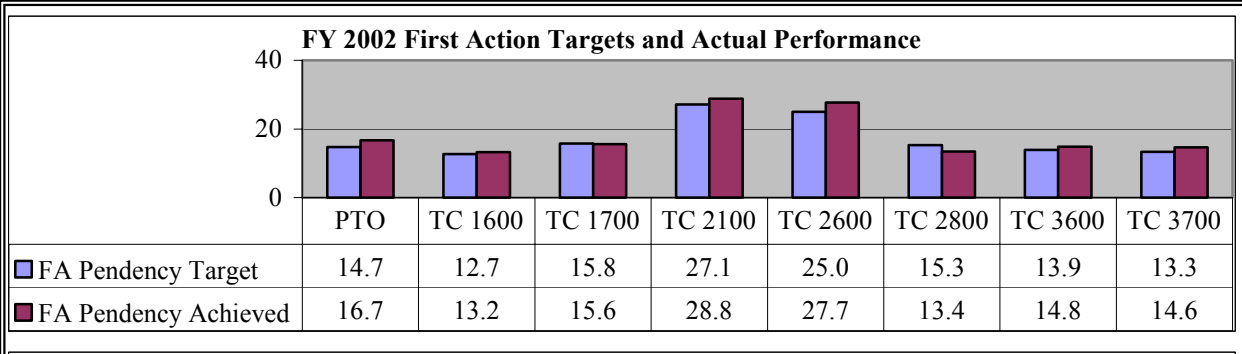
Source: Office of Inspector General and PTO Fiscal Year 2003 *Performance and Accountability Report*

Agency requirements. PTO's own goal for total pendency is more aggressive than that of AIPA, although its goal for first action falls short of the AIPA timeframe. PTO's recent track record for meeting both its first action and total pendency goals has been mixed. Its fiscal year 2003 target for FAOMs was 18.4 months, and for total pendency was 27.7 months.[5] Actual average times for each were 18.3 months and 26.7 months, respectively. However, PTO does not expect to be able to keep up this track record and expects future performance to be unable to keep pace with the past and anticipated rise in the number of applications and the growing backlog (see figure 2 on page 2).

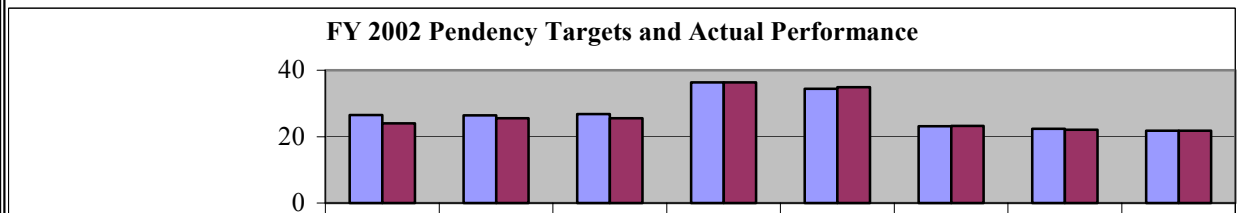
Figure 6 compares PTO goals to actual examiner first office action and total pendency for fiscal year 2002 in each of the seven technology centers that we reviewed. Each technology center has different processing goals based on the technology in the center. For fiscal year 2002, PTO and most technology centers met their overall pendency goals but neither the centers nor PTO met their first action goals.

[5] PTO Fiscal Year 2003 *Performance and Accountability Report.*

Figure 6. PTO's First Action and Total Pendency Targets and Achievement for Fiscal Year 2002



	PTO	TC 1600	TC 1700	TC 2100	TC 2600	TC 2800	TC 3600	TC 3700
FA Pendency Target	14.7	12.7	15.8	27.1	25.0	15.3	13.9	13.3
FA Pendency Achieved	16.7	13.2	15.6	28.8	27.7	13.4	14.8	14.6

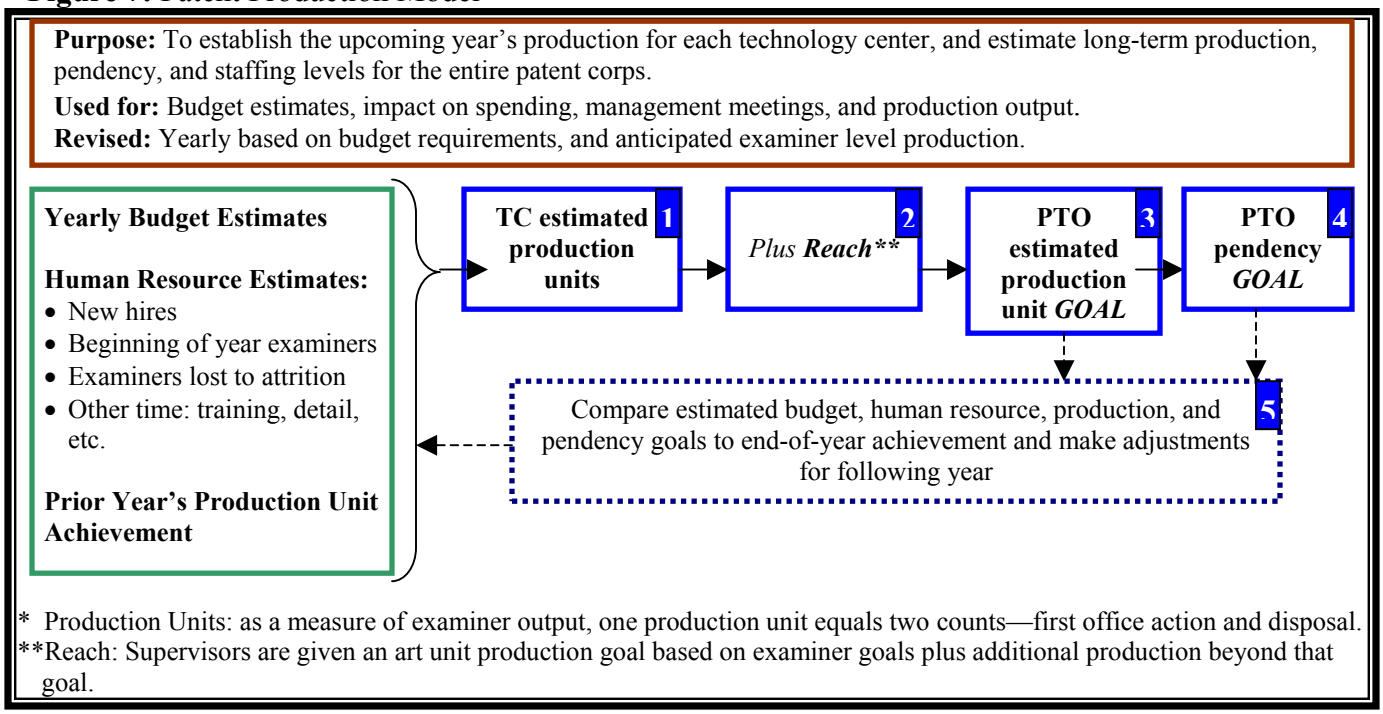


	PTO	TC 1600	TC 1700	TC 2100	TC 2600	TC 2800	TC 3600	TC 3700
Total Pendency Target	26.5	26.4	26.8	36.3	34.4	23.1	22.4	21.8
Total Pendency Achieved	24.0	25.5	25.5	36.3	34.9	23.2	22.1	21.8

Source: PTO Management and PTO 2002 Performance and Accountability Report (PTO pendency achieved).

Patent Production Model requirements. PTO has used the patent production model since 1982 to establish yearly production levels for its eight technology centers and estimates for future production, pendency targets, and staffing resources (see figure 7). PTO's model provides a structured methodology for establishing annual production goals. The model determines each technology center's yearly goal based on last year's actual examiner achievement and on next year's anticipated budget and examiner staffing levels. Specifically, the goal is based on the workload for the anticipated number of examiners for each technology center. The difference between the production goals of the technology centers and PTO goals is the "reach" or additional production expected for each technology center. The model combines the production goals for each technology center to determine the agency's overall production goal. For the last four fiscal years, PTO achieved an average of 100.7 percent of the model's goal—indicating the model has adequately projected agency production (see appendix 1).

Figure 7: Patent Production Model

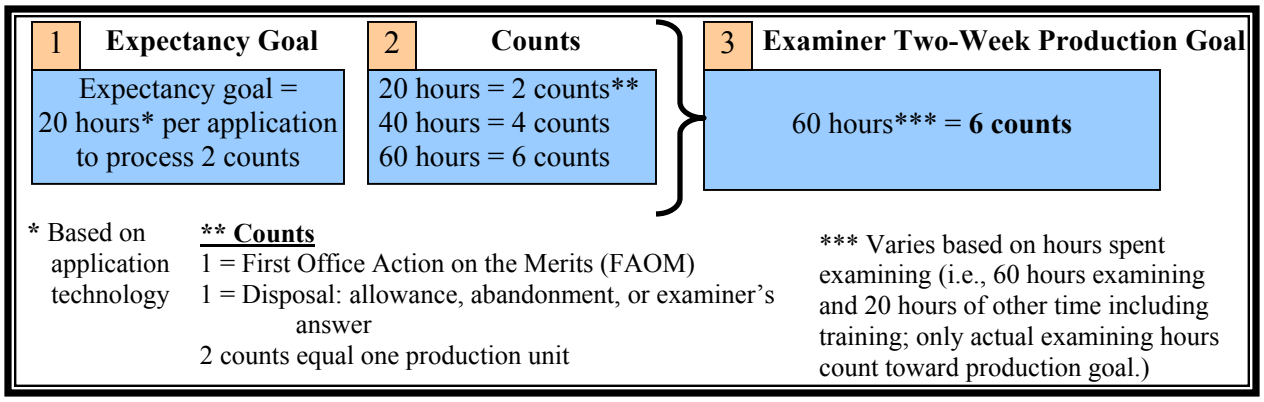


Source: PTO's Patent Production Model and management discussions

Examiner requirements. PTO has hundreds of expectancy goals—the average number of hours within which examiners must process each application[6]—based on different technologies. PTO has not revised current examiner goals since 1976. Most examiners have only a few goals because they process applications involving the same technology. Individual examiner productivity is measured in terms of "counts:" examiners receive one count for each first office action[7] and one for each disposal,[8] which together equals one production unit (see figure 8). In a two-week period, examiners are expected to process a certain number of counts based on their expectancy goal. For example, GS-12 examiners processing applications from class 435, chemistry, molecular biology and microbiology, have goals ranging between 21.5 to 25.9 hours to process two counts. Based on all art unit technologies, the fiscal year 2003 GS-12 equivalent hours for two counts was 20.5.

[6] Expectancy goals vary among examiners and are based on the individual examiner's grade level and the complexity of the technology under review.
[7] The examiner issues an allowance or non-final rejection (initial rejection allowing applicant to submit amendments) after reviewing the application for the first time.
[8] The examiner issues an allowance or receives an abandonment or writes an examiner's answer to complete action on the application.

Figure 8: Example of Examiner Production System



Source: Office of Inspector General

An individual art unit's annual production is calculated by adding the production units of its examiners. A technology center's production, in turn, is the total production numbers reported by its constituent art units.

Improving Individual and Agency Performance

PTO seeks to improve individual performance and productivity via performance appraisal and awards systems that provide criteria and financial incentives for meeting specified goals. Examiners who perform at a fully successful level for the six elements contained in the performance plans (see figure 18 on page 29) and meet certain other criteria, can receive a gain-sharing award (for examiner production averaged over the fiscal year), a special achievement award (for examiner production averaged over four consecutive quarters), and/or a pendency reduction award (for examiner workflow management over two consecutive quarters).

PTO has developed a blueprint for overhauling its patent processes to boost productivity, substantially reduce backlogged applications, and help ensure granted patents are of the highest quality. Its *21st Century Strategic Plan*, issued in June 2002 and revised in February 2003, proposes a variety of initiatives—such as automated processing (e-government), sharing search results with foreign patent offices, and patent search outsourcing.

As part of its strategic plan, PTO developed an action paper entitled "Transforming Work: The E-Government Work Place." It addresses the use of paralegals for procedural examination of trademark applications, currently being completed by attorneys. PTO believes that this option could save approximately $6 million annually by incorporating paralegal examiners at a 3 paralegals to 1 attorney ratio. PTO officials would like to create cross-functional teams, consisting of attorneys and paralegals, with attorneys handling substantive issues and paralegals handling simple or purely procedural issues. Changes in the trademark-examining workforce could be implemented over time; as attorneys leave, the vacated positions could be filled to achieve the proposed attorney-to-paralegal ratio.

PTO recently launched a pilot program to test the use of paralegals to perform tasks currently handled by attorneys. Specifically, a small group of paralegals will be trained on one aspect of the examination process—the statement of use (SOU). The paralegals will review SOUs and identify issues that must be addressed by Trademark Operations before the mark can be approved for registration. PTO will collect statistics on how frequently the paralegals correctly identify issues and determine average time required for the paralegals to review an SOU and create a list of addressable issues. In subsequent phases, PTO plans to evaluate paralegals participation in other aspects of the trademark examination process.

PTO believes that allowing attorneys to focus on legal issues related to application review should improve the examination process because of both the increased use of attorney's legal skills and their reduced handling of non-substantive trademark examination issues. Similarly, allowing paralegals to focus on procedural examination should reduce compensation costs, improve quality, and offer paralegals better opportunities for advancement to a higher grade. When achieved, these savings could be passed on to applicants in terms of lower fees.

OBJECTIVES, SCOPE, AND METHODOLOGY

The Office of Inspector General conducted this program evaluation in accordance with the *Quality Standards for Inspections* issued by the President's Council on Integrity and Efficiency, and under authority of the Inspector General Act of 1978, as amended, and Department Organization Order 10-13, dated May 22, 1980, as amended. We sought to determine whether PTO's current means for enhancing production—patent examiner goals, awards, and performance appraisal plans—reflect current efficiencies in work processes and improved technology. Our methodology included the following:

- **Statistical analysis**. We evaluated the overall statistics for seven of PTO's eight technology centers[9] and conducted in-depth analysis of art unit production and of art units' percent of expectancy goal achieved. We also reviewed the patent examiner performance appraisal plans and award systems. In addition, we conducted a limited scope review of the trademark examination process and the potential to improve productivity, including the trademark examiner performance appraisal plans to determine how well they are linked with supervisor and PTO goals.
- **Interviews.** We spoke with PTO management, technology center directors, supervisory patent examiners, patent examiners from all seven technology centers, and trademark examiners, as well as with patent attorneys[10] and patent bar members[11] to obtain their suggestions for improving examiner production and reducing pendency.
- **Literature review**. We evaluated PTO reports on past and future productivity initiatives and implementation schedules for future initiatives, as well as reports from private and public sector entities, including GAO, to identify best practices and process improvements that can be implemented at PTO.

While we evaluated examiner production over the last 5 years for seven of the eight technology centers and some art units, it was not our purpose—nor did we attempt—to determine the adequacy of the Patent Application Location and Monitoring system, nor did we review the validity of the PALM system data. PTO could not provide some data for fiscal year 2002 because the PALM system cannot replicate data after a fiscal year has occurred. We conducted our fieldwork at PTO headquarters in Arlington, Virginia, from October 2003 to May 2004. At the conclusion of our review, we discussed our recommendations with the Commissioner for Patents, the Chief Financial Officer, and other senior PTO officials.

[9] We did not include technology center 2900 because patent corps reports do not include data for it.
[10] Patent attorneys work with patent related law.
[11] Patent bar members are registered with PTO and have been approved to represent inventors before the PTO.

OBSERVATIONS AND CONCLUSIONS

I. Patent Examiner Goals Have Not Changed Since 1976 to Better Reflect Efficiencies in Work Processes and Improved Technology

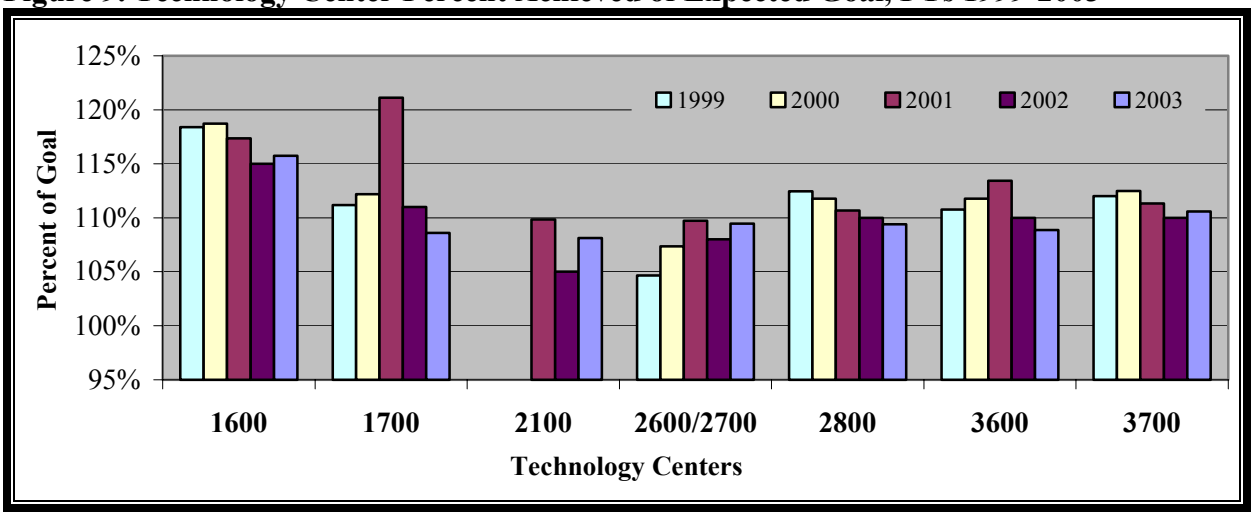
PTO has invested heavily in new automation since the 1980s to improve examiner work processes and efficiency. Not surprisingly then, we found that most art units process applications in less time than their allotted goals that were established in 1976. In addition to examiners exceeding their goals, PTO statistics showed that patent quality is improving and patent complexity is not materially increasing.[12] PTO should reevaluate its goals and consider revising them to reflect efficiencies in work processes from automation and other enhancements.

A. Most art units process applications in less time than allotted goals

Our review of technology center production reports for fiscal years 1999-2003 revealed that approximately 95 percent of the art units processed applications in less time than their allotted goals. However, examiner production remained stagnant in fiscal years 2002 and 2003. To evaluate examiner production, we conducted two detailed reviews. First, at the technology center level we evaluated expected versus actual hours per production unit to determine whether the centers were meeting their production goals. PTO examiners have one primary production goal: expectancy goal or time allotted per application in hours. If examiners process applications faster than their expectancy goal, then they would exceed their expectancy goal and be eligible for an award. If they spend more hours per application than their expectancy goal, then they will not qualify for a production award (see section III). Figure 9 shows that the 7 technology centers that we reviewed surpassed the 100 percent level for all 5 years, or spent less time than their expectancy goals to process applications.

[12] Each expectancy goal contains a complexity factor for the technology that an examiner has to review. The more complex the technology, the higher the complexity factor. From 1999 to 2003, the complexity factor increased 4.25 percent. From 1990 through 2003, the complexity factor increased 11 percent or an average of .85 per year based in part on some new technologies.

Figure 9. Technology Center Percent Achieved of Expected Goal, FYs 1999-2003



Source: PTO PALM Reports and OIG analysis

Second, we also evaluated production statistics for all art units in the seven technology centers to determine how many art units had met their goals. In fiscal year 2003, we found that 256 out of 269 (95 percent) art units processed applications in less time than their allotted goals (see figure 10). Supervisory patent examiners indicated that some of the goals are probably too easy to reach. Indeed, productivity research suggests that increased automation and improvements in systems and methods have—for most sectors—correspondingly increased output per employee per year.[13]

Figure 10. Art Unit Attainment of Expectancy Goals

	1999	2000	2001	2002	2003
Art Unit Production (Percent Expectancy)	111.6%	112.4%	113.3%	109.9%	110.1%
Art Units Processing Applications in Less Time Than Expectancy Goals (%)	91%	92%	95%	N/Avail. [1]	95%
Art Units Processing Applications in Less Time Than Expectancy Goals (#)	195 out of 215	220 out of 239	239 out of 251	N/Avail.	256 out of 269

[1] PTO did not have historical art unit statistics for 2002 and could not replicate this data.

Source: PTO PALM Reports and OIG analysis

PTO union personnel provided a different opinion from that of the supervisory patent examiners. Union personnel stated that some examiners work voluntary overtime to complete applications because they are not allotted enough time per application. They emphasized that examiners need time for actions such as preparing final rejections, which they do not receive credit for. Some

[13] Monthly Labor Review, May 1997, *The Federal Productivity Measurement Program: final result*, p. 27.

examiners stated that they work no voluntary overtime, and some said that they work overtime depending on the time of the year. However, while some examiners claim that they work voluntary overtime, PTO does not document voluntary overtime because there are no sign-in/sign-out requirements. Therefore, based on PTO statistics, most examiners use less time per application than they are allotted.

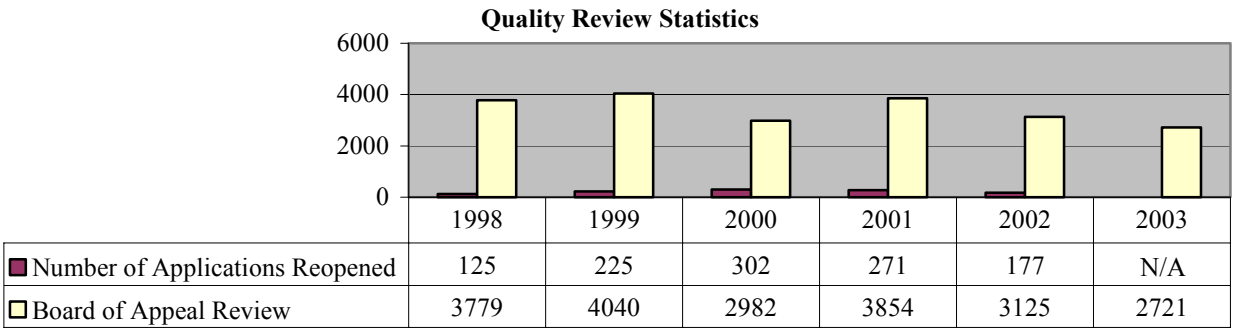
B. Examiner review of patent applications has improved

Quality patents have been defined as those that can be enforced in court, consistently survive validity challenges, and be dependably employed as a technology transfer tool.[14] Since December 2002, PTO has made quality a key initiative, and has begun to implement some quality improvement programs, including integrating reviews at all stages of examination, expanding reviews of senior examiner work, expanding the second review of applications to all technology centers, and most importantly, reviewing the work of all examiners, which had only been done randomly after a patent has been allowed (see appendix 2). In 2002, PTO's user community emphasized the importance of PTO achieving the goals outlined in its strategic plan, including the quality initiatives.[15]

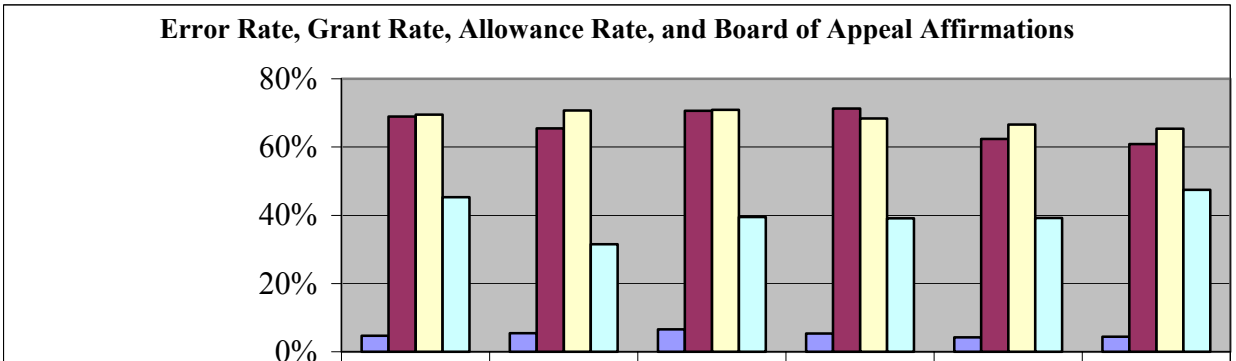
We found that six of PTO's key quality statistics have generally improved over the past 2 years, particularly as measured by decreases in five areas—examiner error rates, applications reopened, applications referred to the Board of Patent Appeals and Interferences, examiner grant rate,[16] and examiner allowance rate, and an increase in the sixth—percentage of cases affirmed or affirmed-in-part by the Board of Patent Appeals and Interferences. Figure 11 documents the changes in all six statistics over the 6-year period.

[14] Statement by John R. Thomas, Professor of Law, Georgetown University, before the House Judiciary Subcommittee On Courts, the Internet, and Intellectual Property, July 24, 2003.
[15] American Intellectual Property Law Association (AIPLA), Biotechnology Industry Organization (BIO), Intellectual Property Owners Association (IPO), and International Trademark Association (INTA), *Memorandum from AIPLA, BIO, IPO, and INTA to the Honorable Mitchell E. Daniels, Jr.,* October 24, 2002.
[16] While defined in the trilateral patent office statistical report, USPTO does not track the grant rate.

Figure 11: PTO Quality Review Statistics for FYs 1998-2003



	1998	1999	2000	2001	2002	2003
Number of Applications Reopened	125	225	302	271	177	N/A
Board of Appeal Review	3779	4040	2982	3854	3125	2721



	1998	1999	2000	2001	2002	2003
Error Rate	4.7%	5.5%	6.6%	5.4%	4.2%	4.4%
Grant Rate	69.0%	65.4%	70.6%	71.3%	62.3%	60.8%
Allowance Rate	69.5%	70.7%	70.9%	68.4%	66.6%	65.4%
Board of Appeal Affirmations	45.3%	31.5%	39.5%	39.1%	39.2%	47.5%

Source: PTO Management and OIG analysis

PTO's primary quality indicator is the examiner error rate, which identifies reasons for errors and suggests corrective actions to eliminate them. PTO quality review specialists calculate this rate by analyzing a sample of allowed patents for patentability issues, such as the adequacy of the examiner's search and the originality or conventionality of the applicant's claims, and determining how many (percent) contain at least one claim that would be held invalid in a court of law.

The remaining five statistics are as follows: (1) PTO reopens applications based upon applications sampled for post review by PTO personnel; (2) the Board of Patent Appeals and Interferences reviews adverse patentability decisions at the request of patent applicants, owners, and/or third-parties; (3) the Board of Patent Appeals and Interferences affirms or affirms-in-part

cases that it reviews; (4) the examiner grant rate;[17] and (5) the examiner allowance rate.[18] The later two statistics measure the rigor/quality of the patent examination process—the assumption being that the lower the rates, the more rigorous the examination process. The grant rate documents the percentage of applications granted out of yearly disposals (i.e., granted, rejected, and abandoned), while the allowance rate documents the percentage of applications allowed out of yearly application disposals.

Other quality improvement indicators

We noted five other factors that indicate that the stability and oversight of the examiner workforce has improved, which should increase the quality of patent applications processed.

1. The examiner attrition rate dropped from a high of 13.77 percent in 2000 to 7.00 percent in 2003, which means that PTO is retaining examiners and expanding the experience of the corps. Specifically, the number of GS 12 through 15 examiners has risen from 53.8 percent in fiscal year 1999 to 70 percent in fiscal year 2003, suggesting a more experienced patent corps. (See appendix 3.)

2. The ratio of SPEs to examiners—13 to 1— remained virtually unchanged from fiscal year 1998 through 2002, which suggests that supervisors' availability for monitoring examiner performance and quality has not been diminished despite increasing staff numbers and workload.

3. FY 2003 performance appraisals for SPEs have put greater emphasis on evaluating the quality of examiners' work—raising this appraisal element from 25 percent to 35 percent of a SPE's overall performance, and requiring that they now assess not only the quality of an examiner's performance, but also the quality of an examiner's products and services. (See appendix 4.)

4. During FY 2002, PTO instituted quality reviews of applications in process, to complement its reviews of patents granted (see appendix 2). The new procedure provides a two-tier assessment of applications in the examination pipeline—one to determine quality of examiner work and the other to identify examiner training needs—which should increase application quality.

5. In October 2003, PTO announced that it would begin a 5-point program to improve the quality and consistency of examiner restriction practices in Technology Center 1600, Biotechnology and Organic chemistry. Examiners will be trained to use best practices

[17] The examiner grant rate is the number of applications granted during the reporting period divided by the number of disposals, including abandonments, during the reporting period. PTO does not track the grant rate.
[18] The examiner allowance rate is the number of total applications allowed by PTO divided by the total number disposed.

related to restricting the number of inventions and/or claims in biotechnology, pharmaceutical, and organic chemistry applications.[19]

Union and industry concerns about patent quality

Despite PTO's quality improvement indicators, the agency's examiner union and a key PTO user group contend that patent quality has decreased, noting their belief that (1) the increased complexity of applications has not been offset with a corresponding expansion in examiner hours per application; (2) the number of lawsuits and threatened lawsuits against U.S. manufacturers accused of having invalid patents is rising; and (3) PTO's patent searches do not always locate the most relevant prior art. However, the agency's examiner union and two user groups could not provide any evidence to support their conclusions.

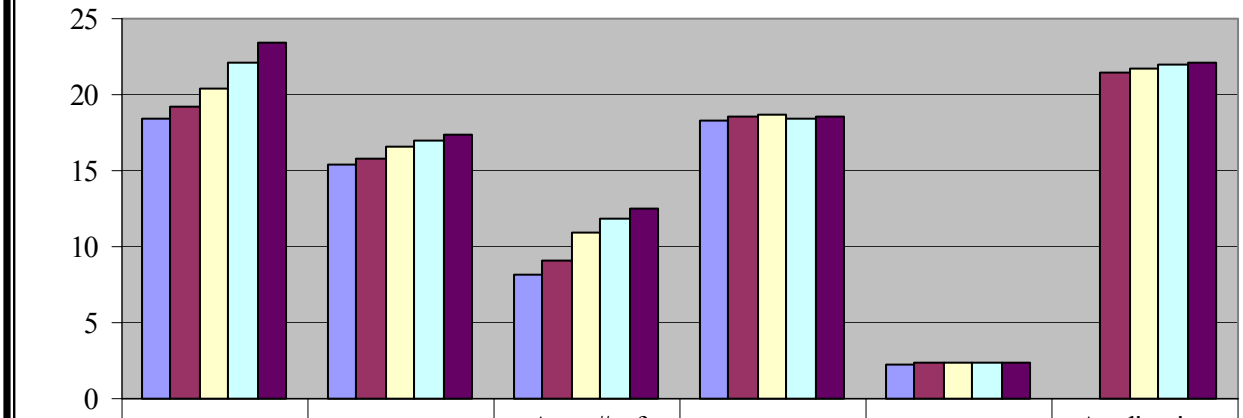
The examiner union stated that patent quality will not improve until examiners are given more time to process applications. The user group stated its belief that PTO's patent searches are not as thorough as those performed by the European Patent Office, which allows its examiners more time per search and has a much higher pendency rate than PTO. The group agrees, however, that PTO's strategic plan should improve patent quality. We also agree that patent quality can always be improved and that PTO's current and planned initiatives should help promote such improvement.

C. Application complexity has gradually increased

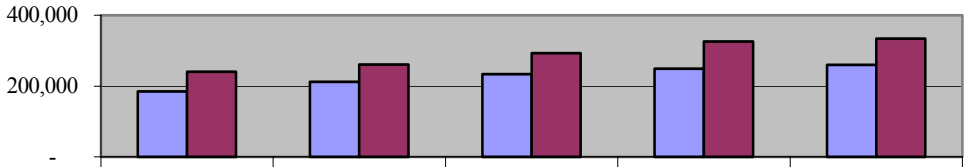
While some patent applications have become more complex, depending on the type of technology involved, the increases have been gradual and without dramatic impact on the amount of time examiners need to process most applications. PTO management cited seven statistics as reasonable indicators of application complexity: (1) original claims filed per application, (2) final claims per issued patent, (3) average number of restrictions per examiner,[20] (4) hours for first office action on the merits, (5) examiner actions per application, (6) application complexity—hours per production unit, and (7) information disclosure statements—relevant prior art filed by the applicants. Figure 12 shows steady increases or the same levels for seven measurements of complexity.

[19] Press Release, "*USPTO Announces Action Plan Targeted to Improve Quality and Respond to Customer Needs for Biotech Patent Applications,"* October 6, 2003.
[20] Examiners restrict applicant claims in applications to one invention.

Figure 12: Measures of Application Complexity



	Claims in filed application	Claims in issued patent	Ave. # of restrictions per examiner	Hours per FAOM	Actions per application	Application Complexity (in examining hrs)
1998	18.4	15.3	8.2	18.3	2.3	N/A
1999	19.3	15.8	9.1	18.6	2.3	21.5
2000	20.5	16.6	11.0	18.7	2.3	21.7
2001	22.2	17.0	11.8	18.4	2.4	22.0
2002	23.5	17.4	12.5	18.5	2.4	22.1



	FY98	FY99	FY00	FY01	FY02
Number of Information Disclosure Statements Filed	185,234	212,644	233,493	249,313	260,082
Number of Applications Filed	240,090	261,041	293,244	326,081	333,688

Source: PTO yearly statistics.

Our discussions with examiners, SPEs, and technology center directors elicited differing opinions regarding the increase in application complexity and its impact on processing time, with some contending the impact has been significant, and others that it has been minimal. We believe the PTO data presented in figure 12 supports the latter opinion, as follows:

- Original claims filed per application have risen by only about one claim per year for the last 5 years. Applicants may submit claims for only one unique invention per application, but according to PTO personnel, they often attempt to include multiple inventions in one application. Outside patent personnel believe that this statistic is a fair measure of

application complexity, with fewer claims increasing the quality of patent examination and excessive claims decreasing the quality of examination.[21]

- Final claims per issued patent increased by just two over the 5-year period—a very small increase. PTO personnel believe this statistic is also a fair measure of complexity.[22]

- Examiner restrictions per year rose by an average of only one per year over the last five years. Examiners restrict the number of claims in an application usually to limit an application to one invention. If an applicant provides new and/or additional claims to the examiner's original restriction, the examiner could restrict the same application more than once. An examiner's 12.5 restrictions could come from a handful of applications.

- The number of hours for FAOMs—a subset of total examiner hours per application—has remained virtually unchanged through the years— averaging 18.5 total hours per application in fiscal year 2002 compared with the 1998 average of 18.3 hours.

- Examiner actions to dispose of an application have also remained relatively constant, indicating that examiners are not producing more actions and/or providing more effort on the same number of actions.

- The anticipated types of applications filed for fiscal years 1999 to 2002 and the estimated average hours to process these applications were 21.5, 21.7, 22.0, and 22.1. While not the actual number of total hours used by examiners to process applications, this indicates that the application technology and expected hours per application have only risen slightly.

- The number of information disclosure statements[23] (IDSs) filed—while increasing over the 5-year period—is consistent with the increase in new applications submitted (39 percent and 40 percent, respectively). One SPE stated that the rise in applications and IDSs goes hand in hand and does not indicate an increase in application complexity. One SPE, however, added that the length of some IDSs has greatly increased over the last 5 years, which would extend processing time. Another SPE stated that most IDSs are of reasonable length, and thus do not add to an application's complexity. Because PTO does not document the number of pages in information disclosure statements or otherwise assess the complexity of the IDSs, we could not support either conclusion.

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[21] Scott Wollinsky, *"An Inside Look At The Patent Examination Process,"* The Metropolitan Corporate Counsel, September 2002.
[22] In fiscal year 2003, the final number of claims per issued patent was 18.1.
[23] Applicants submit IDSs in addition to their applications to disclose prior art and any other information material to patentability.

Summary

We found that most technology centers and art units are consistently exceeding their production goals, while quality is improving and application complexity is only gradually increasing. Therefore, we recommend that PTO reevaluate its current patent examiner goals and assess the merits of revising them to reflect efficiencies in work processes resulting from automation and other enhancements.

PTO agreed that current patent examiner goals should be reevaluated to assess the merit of revising them to reflect changes in work processes. While it did not express complete concurrence with the analysis and rationale set forth in our report to support this recommendation, PTO did agree that changes have occurred, and more are planned in connection with the implementation of the *21st Century Strategic Plan.* Thus, PTO reported that it has already begun reassessing the current goal system. It also noted that any changes to examiners' goals will need to be linked effectively to changes in award programs and performance appraisal plans.

II. Patent Examiner Performance Appraisal Plans Are Not Linked to Supervisor and PTO Goals

PTO and supervisory patent examiners have PTO production goals to achieve. However, examiner performance appraisal plans (PAPs) do not link individual performance to agency targets for reducing time to complete first actions and overall pendency. As a result, examiners stated that they set their personal annual production goals according to the awards they want to receive rather than to help achieve PTO's goals.

A. Patent examiners are not rated on achieving PTO's goals

While the examiner PAP provides examiners with constant production goals based on their grade levels and expectancy goal(s), it has not been materially revised since 1987 to reflect changes in examiner efficiency and application complexity. As a result, the plans do not adjust examiner requirements to meet PTO's changing production requirements and examiners are not rated on achievement of PTO's goals. PTO management cited lengthy union negotiations for not trying to link examiner and PTO goals through an updated PAP.

To meet their own production goal, examiners can process newer applications first, which may fulfill their production goal but have little impact on the backlog and meeting agency pendency goals.[24] However, SPE and agency production and pendency goals change yearly to reflect changes in application filings, the backlog, and examiner staffing levels. Figure 13 illustrates how the examiner plan does not measure examiner contributions to SPE and PTO pendency and production goals.

Figure 13: Examiner and SPE Performance Appraisal Plans and PTO Performance Goals

Type of Goal	Examiner	SPE (Art Unit)	PTO
First Action Pendency Goal	None*	New Case Date Goal**	18.4 months in FY 03
Total Pendency Goal	None	New Case Date Goal**	27.7 months in FY 03
Production Goal	Expectancy Goal	Examiner production + additional production to "reach" PTO goal	Patent Production Model Goal-see page 7.

*Workflow management requires examiners to process one application with the oldest actual and effective filing date.
**A group of applications filed between certain months of the year that must be examined to meet agency goals.

Source: Examiner and SPE Performance Appraisal Plans; PTO management

SPE's are responsible for motivating their examiners to meet these higher production goals. As a result, the SPE performance appraisal plans have two components that attempt to drive examiner production: "reach" and "new case date goals." Specifically:

- SPEs have higher goals for their examiners' production than is reflected in the examiners' PAPs, the difference being the "*reach*" that examiners should achieve.

[24] The workflow management element requires examiners every month to process only one application with the oldest actual and effective filing date.

SPEs are expected to motivate examiners' to exceed their production units each year beyond the level contained in the examiners' PAPs.

- SPEs are assigned a "*new case date goal*"—a group of applications filed between certain months of the year that must be examined to meet agency pendency goals. While the SPE directs examiners to process these applications, examiner performance plans do not require examiners to process these applications, and thus examiners are not held accountable for failing to turn them around within SPE and agency goals.

PTO management believes that the new case date goals and reach programs have been effective for two reasons. First, examiners exceeded PTO production goals for fiscal years 2001-2003 (see appendix 1). Second, PTO's fiscal year 2003 first action pendency of 18.3 months was slightly less than its 18.4-month goal. However, while PTO met its production goals in 2003, first action and overall pendency have risen. More importantly, PTO estimates that first action and overall pendency will continue to rise in the next few years, even if PTO fully implements its 21st Century Strategic Plan.

The key point is that in fiscal year 2002, five of the seven technology centers did not meet their first action pendency goal (the average was 16.7 months) and two centers did not meet their overall pendency goal (see figure 6 on page 6). Yet the number of examiners receiving outstanding ratings increased from 55 percent to 61 percent from fiscal year 2001 to 2002. In other words, even though pendency is rising, examiners were being rewarded for their performance because the elements in their appraisal plans that measure production have not materially changed since 1987; PTO's performance goals, on the other hand, change yearly.

In 1995, a private contractor hired by PTO recommended that the agency revise its performance appraisal and awards systems, and require management to make a clear link between employees' performance and PTO goals.[25] PTO did not implement the contractor's recommendations, citing that such changes would have to be negotiated with the union. A PTO task force also recommended in 1999 that PTO align employee performance requirements among the different employee groups with PTO's performance requirements and business goals.[26] Supervisory patent examiners assign "new case date goals" to individual employees, but they do this to a mixed effect, given the absence of a corresponding link in performance appraisal plans. For example, PTO production data clearly shows that examiners did achieve more than their production goals, although PTO did not achieve its goals to reduce first action and overall pendency.

The contractor's finding reflects a long-standing deficiency common to many federal agencies, according to the General Accounting Office. GAO has emphasized for years that agencies must

[25] Booz-Allen & Hamilton Inc., *PTO Goal Study-Task 1a, An Assessment of the Current Performance Measurements and Rewards System for Patent's Technical Support Staff*, July 1995; and *PTO Goals Study-Task 2, Design Options for the PTO Performance Measurement and Rewards System*, December 1995.
[26] *"Self-Assessment of the U.S. Patent and Trademark Office Using The Baldrige Criteria for Performance Excellence,* August 1999.

disseminate their overall goals to employees at all levels, including those at the front line, and make clear their part in achieving these goals[27] and the relevance of their daily work activities to doing so. To help agencies improve this linkage, GAO issued guidance in March 2002[28] on how to effectively tie unit/individual performance to organizational goals via performance agreements and appraisal plans.[29]

B. Trademark examiners are rated on achieving PTO's goals

Until recently, the PAPs of trademark examiners did not link to the agency's pendency reduction goals—a missing link that trademark management acknowledged. Trademark examiners were required to meet their production goals in accordance with their performance plans. As a result, PTO had no means to hold trademark examiners accountable for contributing to agency goals. The trademark examiner PAPs did not link examiner production rates to overall pendency reduction. Yet trademark managers must meet specific PTO targets for reducing first action and overall pendency.

The Office of Trademarks recently aligned its trademark organizational goals with trademark examiner goals. The office prepared an action paper entitled, "Examining Attorney Performance Appraisal Plan," and in April 2004, it proposed new performance appraisal plans for GS-13 and GS-14 Trademark Examining Attorneys. The changes align attorneys' performance appraisal plans with the mission and goals of the agency. However, PTO's trademark examiner union has appealed the changes in the trademark examiners' performance appraisal plans to the Federal Service Impasses Panel. PTO management stated that the union disagrees that its examiners should do more work for the same amount of pay. The Panel resolves impasses between federal agencies and unions representing federal employees arising from negotiations over conditions of employment under the Federal Service Labor-Management Relations Statute and the Federal Employees Flexible and Compressed Work Schedules Act. If bargaining between the parties, followed by mediation assistance, proves unsuccessful, the Panel has the authority to recommend procedures and to take whatever action it deems necessary to resolve the impasse.

Historically, trademark examiners would meet or exceed their productivity requirements to obtain monetary awards. While examiners exceeded their production goals and received bonuses, the Office of Trademarks continued to fall short of its goals for reducing pendency (see figure 14). For example, the office has failed to meet its targeted goals for first action pendency over the past five years (except in fiscal year 2001 when examiner staff was at an all time high and the number of trademark applications received was dramatically lower than in previous years).

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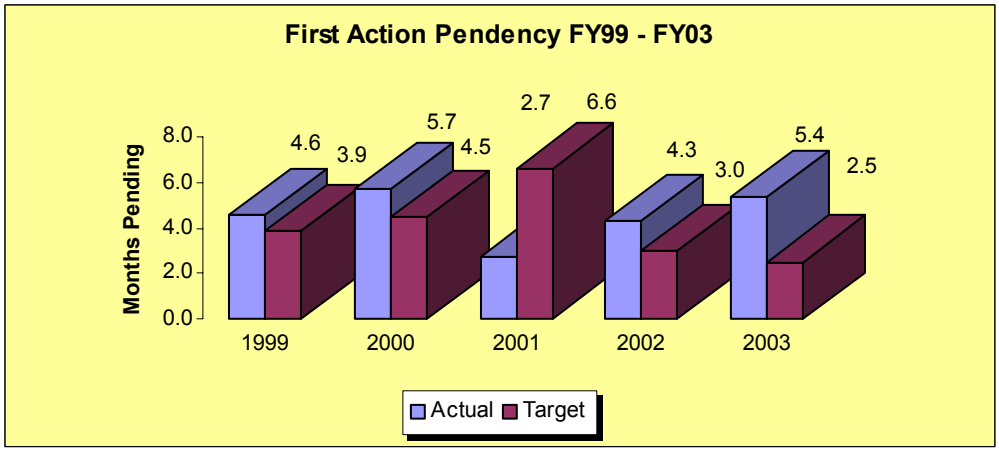
[27] U.S. General Accounting Office, September 2000. *Human Capital, A Self-Assessment Checklist for Agency Leaders,* GAO/OGC-00-14G.
[28] U.S. General Accounting Office, October 2000. *Managing for Results: Performance Agreements*, GAO-01-115. Washington, DC: U.S. Government Printing Office.
[29] U.S. General Accounting Office, March 2002. *A Model of Strategic Human Capital Management*, GAO-02-373SP. Washington, D.C.: U.S. Government Printing Office.

Figure 14: Trademark Actual Versus Targeted First Action Pendency



Summary

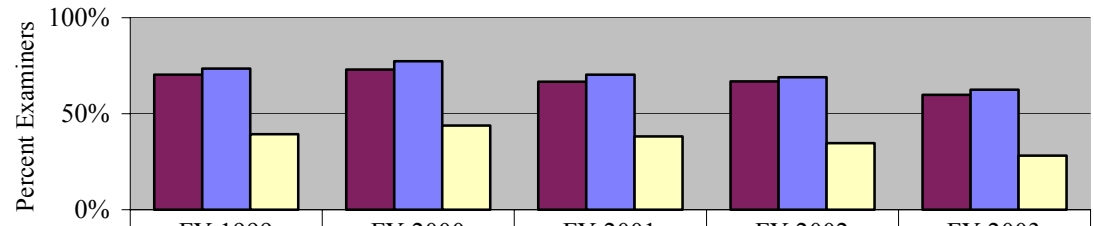
We recommend that PTO examine the benefits of revising its patent examiner performance appraisal plans to (1) better reflect agency production, first action, and overall pendency goals, nd (2) better measure examiner success at processing applications within specified time periods.

PTO agreed that the patent examiner performance appraisal plan should be examined to determine potential revisions to the timeliness critical element, "Workflow Management," and better link the criteria for evaluation to PTO pendency goals. The agency stated that it has begun to review the "Workflow Management" element and will be considering changes along the lines suggested in our report. It also reiterated the point in our report that any changes in the PAP, as well as to the production and award system, may be subject to negotiations with its bargaining unit representatives before implementation.

III. Patent Examiner Award System Is Not Well Structured

PTO offers examiners three incentive awards, each of which is tied to their achievement of specific production levels: (1) an annual gain-sharing award—for examiner production at 110 percent averaged over the fiscal year, (2) a special achievement award—for examiner production at 110 percent averaged over four consecutive quarters, and (3) a pendency reduction award—for examiner workflow management averaged over two consecutive quarters. The requirements for receiving these performance awards are well defined and well understood by supervisors and examiners (see figure 18 on page 29). Figure 15 shows awards distribution for the last 5 years.

Figure 15: Patent Examiner Awards (Fiscal Years 1999-2003)



	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Gain-sharing	70%	73%	67%	67%	60%
Special Achievement	74%	77%	70%	69%	63%
Pendency Reduction	39%	44%	38%	35%	28%

Source: PTO management

We found (1) the gain-sharing award offers examiners no incentive to produce more than 110 percent of their assigned production goal—the minimum production level needed to qualify for a gain-sharing or special achievement award; (2) the special achievement award requires that examiners only achieve the same 110 percent average as the gain-sharing award, but over four consecutive quarters, rather than over the fiscal year; and (3) relatively few examiners have qualified for the pendency reduction award.

A. No "gain-sharing" award is offered between 110-120 percent of the production goal to encourage production at that level

For fiscal years 1999 through 2002, approximately 69 percent of examiners received the productivity gain-sharing award by processing applications in less time than they are allotted (see figure 15 above). In fiscal year 2003, the examiner participation rate dropped to 60 percent. While an examiner can qualify for the award at three different production levels—110, 120, and 130 percent of their production goal—the majority of examiners only achieved the 110 percent level (see figure 10 on page 12). Notably, their average production decreased from 113 percent and remained at approximately 110 percent the last two fiscal years, indicating fewer examiners improved production to receive more than the minimum gain-sharing award.

We found the number of examiners producing at the 100-109 percent level has risen from 29.6 percent to 40.9 percent from fiscal years 1999 to 2003, while the number of examiners producing at the 110-119 percent level went slightly down from 55.1 percent to 50.9 percent (see figure 16 on the next page). There could be many factors affecting the number of examiners receiving or not receiving awards. However, we believe there are four main reasons.

First, examiners and their supervisors contend that once they achieve 110 percent, the structure of PTO's awards system offers little incentive to aim higher: examiners qualify for both gain-sharing and special achievement awards once they achieve 110 percent of their production goal, and there is no reward for additional production until they achieve 120 percent. Second, examiners stated that the extra effort to achieve the 120 and 130 percent goals would require voluntary overtime hours. The potential reward, examiners contend, is not worth the sacrifice. Third, PTO examiners received a 10 percent pay raise in 2001, through an agreement with the examiner union.[30] With a substantial salary increase, the additional production required for an award could become less appealing (perhaps reducing the incentive for examiners to exceed 110 percent of production). Fourth, PTO has initiated additional quality control initiatives that may have reduced the number of examiners at 110 percent of production goal and increased the number of examiners at 109 percent of production goal level (see figure 16).

While most examiners consistently achieve the minimum 110 percent level, fewer examiners are obtaining the higher award levels. An addition of one or two award levels between 110 percent and 120 percent might increase examiner production. Some examiners stated that an award for 115 percent production might motivate them to work toward a higher goal. A TC director and SPE stated that examiners want to balance work and personal responsibilities, and rewarding at 115 percent production might motivate some examiners and art units alike to produce more. The percentage of examiners achieving 120 percent and 130 percent has dropped off so significantly since fiscal year 2000 that the long-term value of these two levels should be evaluated along with consideration of new award levels.

[30] *Agreement on Initiatives for a New Millennium,* June 2001.

Figure 16: PTO Production Statistics for Various Production Levels

	1999	2000	2001	2002	2003
Art Units at 100%	1.0%	2.1%	1.0%	N/Avail.	1.8%
Art Units at 101%	3.0%	1.0%	2.3%	N/Avail.	1.5%
Art Units at 102%	1.0%	1.2%	1.6%	N/Avail.	1.5%
Art Units at 103%	1.0%	1.6%	1.9%	N/Avail.	2.2%
Art Units at 104%	1.0%	3.7%	1.6%	N/Avail.	4.0%
Art Units at 105%	6.0%	4.2%	4.3%	N/Avail.	4.8%
Art Units at 106%	3.0%	2.9%	2.7%	N/Avail	8.0%
Art Units at 107%	4.0%	6.2%	3.2%	N/Avail.	4.8%
Art Units at 108%	5.0%	4.2%	5.5%	N/Avail.	3.0%
Art Units at 109%	4.6%	3.7%	6.3%	N/Avail.	9.3%
Subtotal	**29.6%**	**30.8%**	**30.4%**	**N/Avail.**	**40.9%**
Art Units at 110%	8.3%	4.6%	6.7%	N/Avail.	5.9%
Art Units at 111%	4.1%	5.4%	3.1%	N/Avail.	5.9%
Art Units at 112%	6.0%	6.6%	5.9%	N/Avail.	4.8%
Art Units at 113%	3.7%	2.9%	5.5%	N/Avail.	7.4%
Art Units at 114%	4.2%	5.0%	6.7%	N/Avail.	4.8%
Art Units at 115%	7.4%	2.5%	4.7%	N/Avail.	3.7%
Art units at 116-119%	22.4%	25.1%	24.3%	N/Avail.	18.4%
Subtotal	**55.1%**	**52.1%**	**56.9%**	**N/Avail.**	**50.9%**
Art Units at 120% or greater	15.3%	17.1%	12.7%	N/Avail.	8.2%
TOTAL	**100.0%**	**100.0%**	**100.0%**	N/Avail.	**100.0%**
Art Units at 130% or greater	0.9%	2.5%	0.8%	N/Avail.	0.0%

Source: PTO PALM reports and OIG analysis

B. Special achievement award does not require higher performance than the gain-sharing award

Because PTO only requires examiners to average 110 percent production for the special achievement award, there is little meaningful difference between the special achievement award and the gain-sharing award (see figure 17). PTO's special achievement award does not require examiners to (1) average at least 110 percent per quarter or (2) attain higher than the minimum 110 percent level of the gain-sharing award. PTO is essentially paying examiners for the same behavior/production levels for these two awards. While overall average examiner production has remained at approximately 110 percent for the last two fiscal years, examiners have not consistently maintained that level throughout the year. Examiner production from one quarter to another can vary greatly, mostly in the fourth quarter to obtain required production to meet award criteria.

Figure 17: Comparison of Gain-Sharing and Special Achievement Awards

Award	Current Production Requirement	Current Time Period
Gain-sharing	110%/120%/130%	Average of four quarters for fiscal year
Special Achievement	110%	Average of four consecutive quarters

Source: *Guidelines for Performance Appraisal Plans,* 1987

The special achievement award does not distinguish itself from the gain-sharing award by changing the behavior and production levels of examiners. As an option perhaps the award should be eliminated and the awards' funds combined with the gain-sharing award. As a result, the gain-sharing award would provide a larger incentive for examiners to achieve any new interim awards' levels that would be established.

C. Criteria for pendency reduction award are not tied to pendency reduction

The pendency reduction award lacks the criteria to reduce patent pendency and the financial award to attract examiner participation. From fiscal year 1999 through 2003, many more examiners received both the gain-sharing and special achievement awards compared to the pendency reduction award. To attain the pendency reduction award, examiners must achieve a fully successful rating in the production goal achievement and quality elements over a period of two consecutive quarters in addition to (a) completing and submitting all examiners' answers and responses to amendments replying to non-final office actions within one month of receipt, (b) mailing all office communications within 15 days from submission for credit, and (3) completing and submitting the new case having the oldest actual filing date for credit each pay period (see figure 18 on page 29). We found that the current pendency award is ineffective for two reasons.

A key element in examiners' performance appraisals—workflow management—is used to determine eligibility for the pendency reduction award. Workflow management is assessed in terms of the examiners' completion of 17 tasks (see page 35, appendix 5). However, this element is an ineffective measure for the award because 11 of the 17 tasks are administrative and have no significant impact on the duration of the pendency process. For example, tasks include examiners promptly signing and/or proofreading office communications for mailing and/or correction, conducting proper interviews with the public, and providing consultation services to the public and peers. These tasks only have marginal impact on either time to first action or overall pendency.

By the same token, two of the 17 tasks that *do* impact first action and overall pendency—act on new applications with the oldest effective filing date and act on new applications with the oldest actual filing date—only require examiners to process one of each of these applications by the end

of every other pay period.[31] To address this flaw in the workflow management element and ensure that examiners work on the oldest applications, PTO established informal "new case date goals." Specifically, each supervisor provides his or her examiners with applications from a certain period that must be processed. However, these "new case date goals" are not documented in the workflow management element or the examiner's performance appraisal plan, and therefore do not affect the examiners' eligibility for the award. We believe the new case date goals should be part of the workflow management element if this element is to remain a major measure for the pendency reduction award.

In addition to the problems with the criteria, one SPE emphasized that the award—which amounts to only 0.5 percent of their salary—is not large enough to interest them in working harder to reduce pendency. A number of technology center directors and SPEs concurred that the effort required for so small a return is a further deterrent. For example, to achieve the award, examiners have to review amendments in 30 days rather than 60, and must document their progress in meeting this and other accelerated times biweekly throughout each quarter.[32] One SPE emphasized that the more stringent requirements are achievable, just not worth the reward.

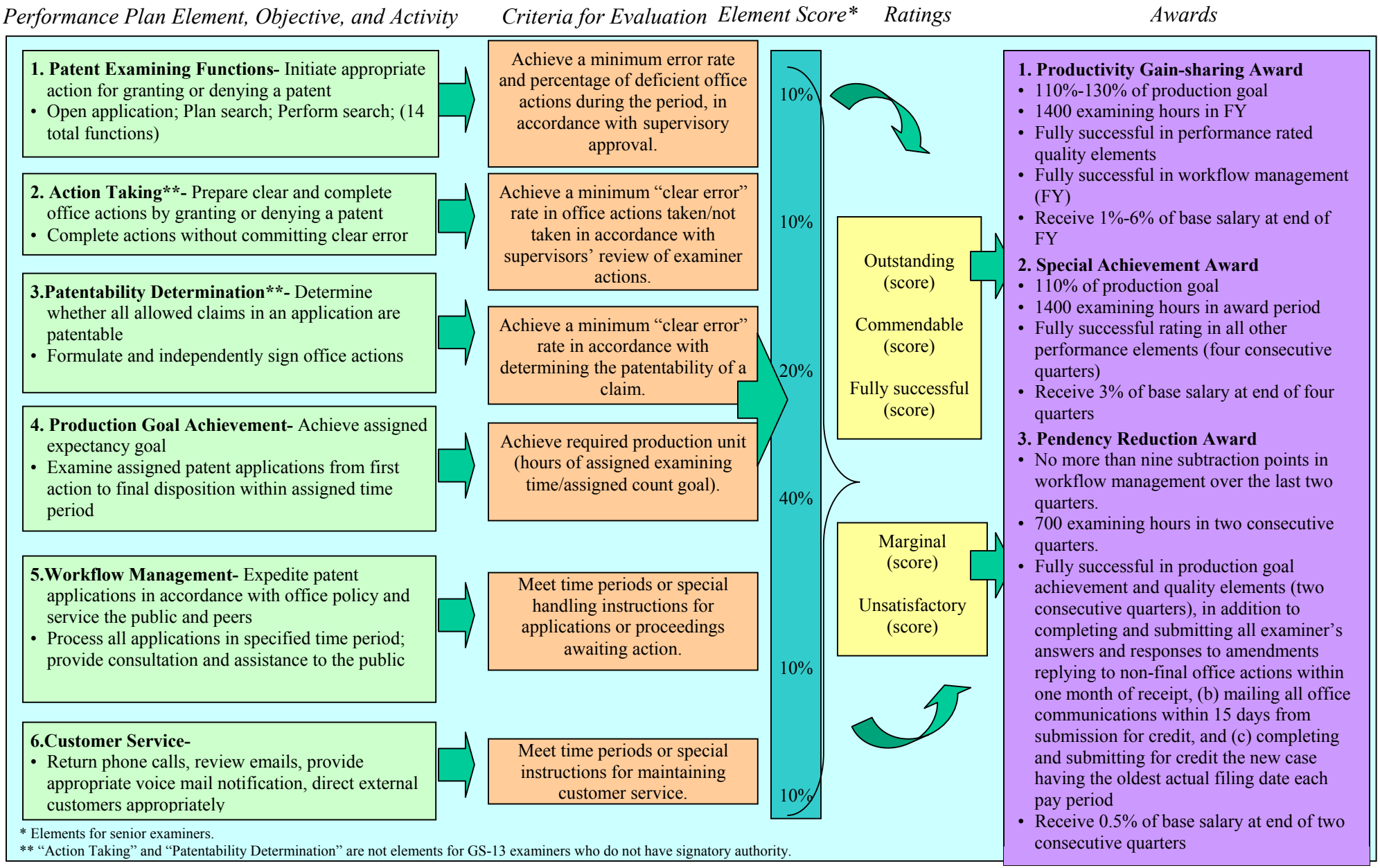
Summary

PTO should evaluate the current patent examiner award system to determine if there is a more effective and efficient way to stimulate higher examiner production.

PTO agreed that the current patent examiner award system should be reevaluated to ensure that it provides the most effective way to stimulate examiner production. The agency said that consideration will be given to the relationship between current programs, and to changing award level increments/payouts to stimulate greater interest in higher achievement. PTO also noted that it will examine examiner historical trends and examiners' motivation to achieve higher production levels, and it will adapt best practices to stimulate and reward examiners who contribute to PTO's high quality efficiency goals.

[31] The examiner performance appraisal plan criteria is different from that in the award criteria.
[32] U.S Patent and Trademark Office, *Guidelines for PAP*, August 1987.

Figure 18. PTO Productivity Awards Criteria



Source: Examiner Performance Appraisal Plans and PTO Award Agreement

RECOMMENDATIONS

We recommend that the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office ensure that the following actions are taken, recognizing that implementation, as appropriate, is subject to negotiation with PTO's unions:

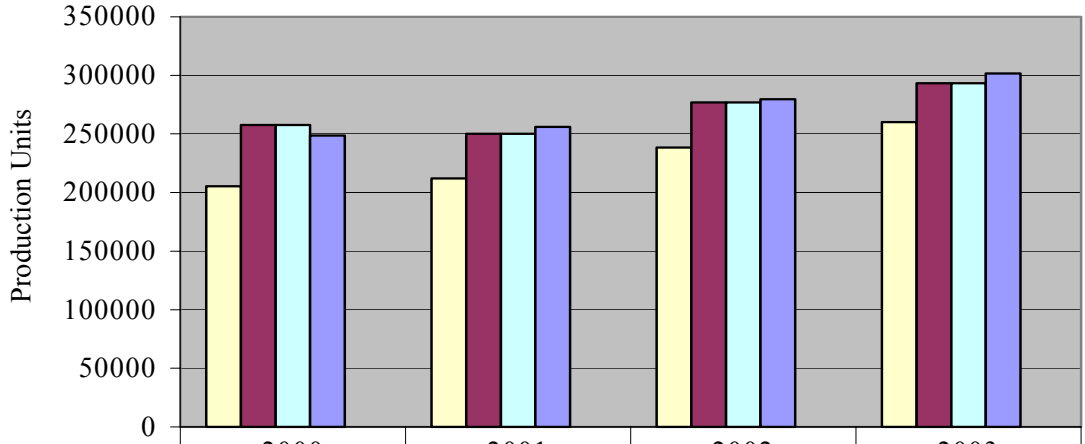
1. Reevaluate current patent examiner goals and assess the merits of revising them to reflect efficiencies in and changes to work processes resulting from automation and other enhancements (see page 11).

2. Examine the benefits of revising patent examiner performance plans to (a) better reflect agency production, first action and overall pendency goals, and (b) better measure examiner success at processing applications within specified time periods (see page 20).

3. Evaluate the current patent examiner award system to determine if there is a more effective and efficient way to stimulate higher examiner production (see page 24).

APPENDICES

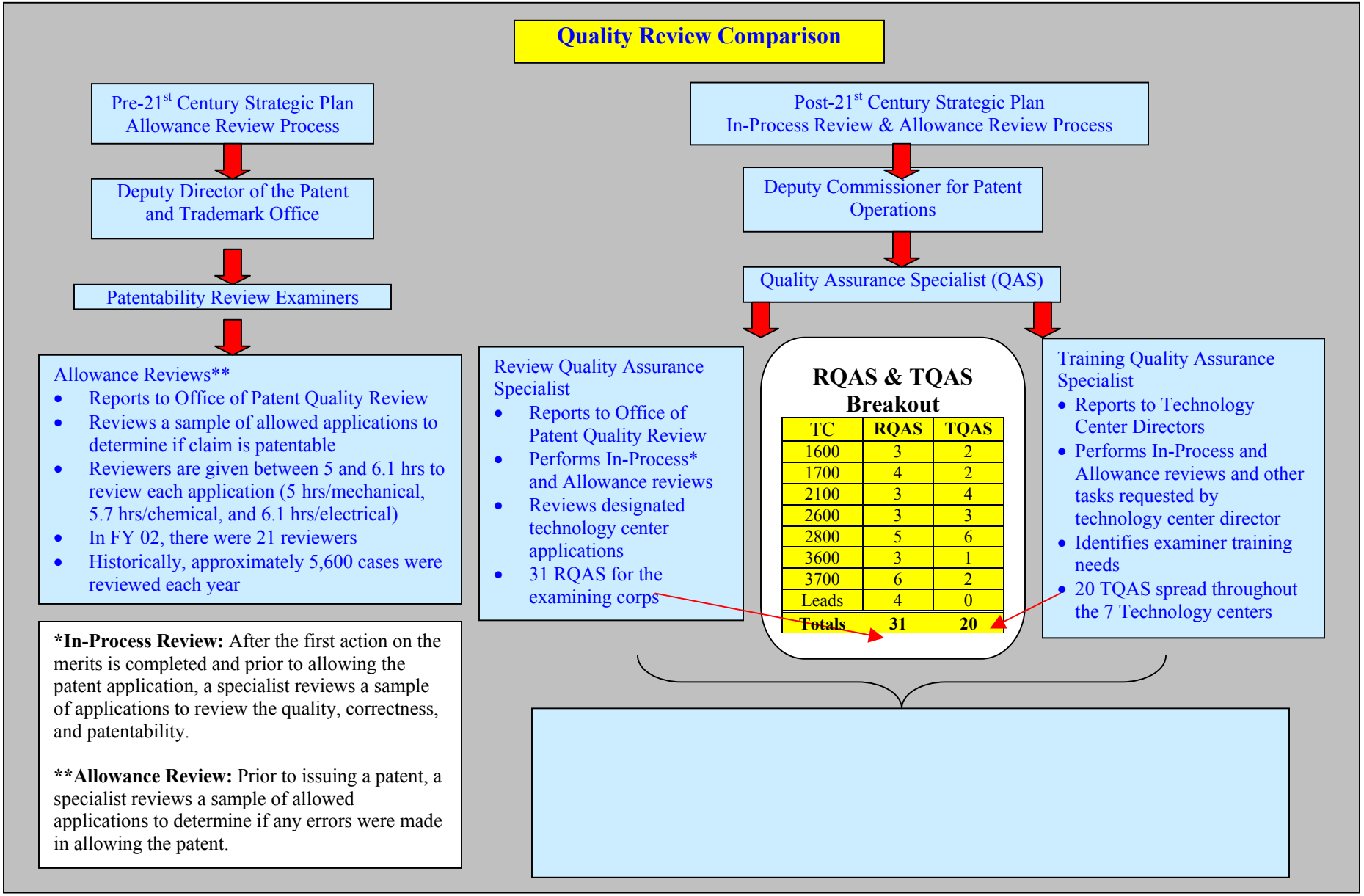
Appendix 1. Examiner and SPE/PTO Production Unit Forecast Model



	2000	2001	2002	2003
Estimated Examiner Production w/o OT	205367	211901	238286	260150
Estimated Examiner Production w/ OT	257700	250000	277000	293289
SPE/PTO Goal	257700	250000	277000	293289
Actual Production	248593	255935	279700	301666
% Achieved	96.5%	102.4%	101.0%	102.9%

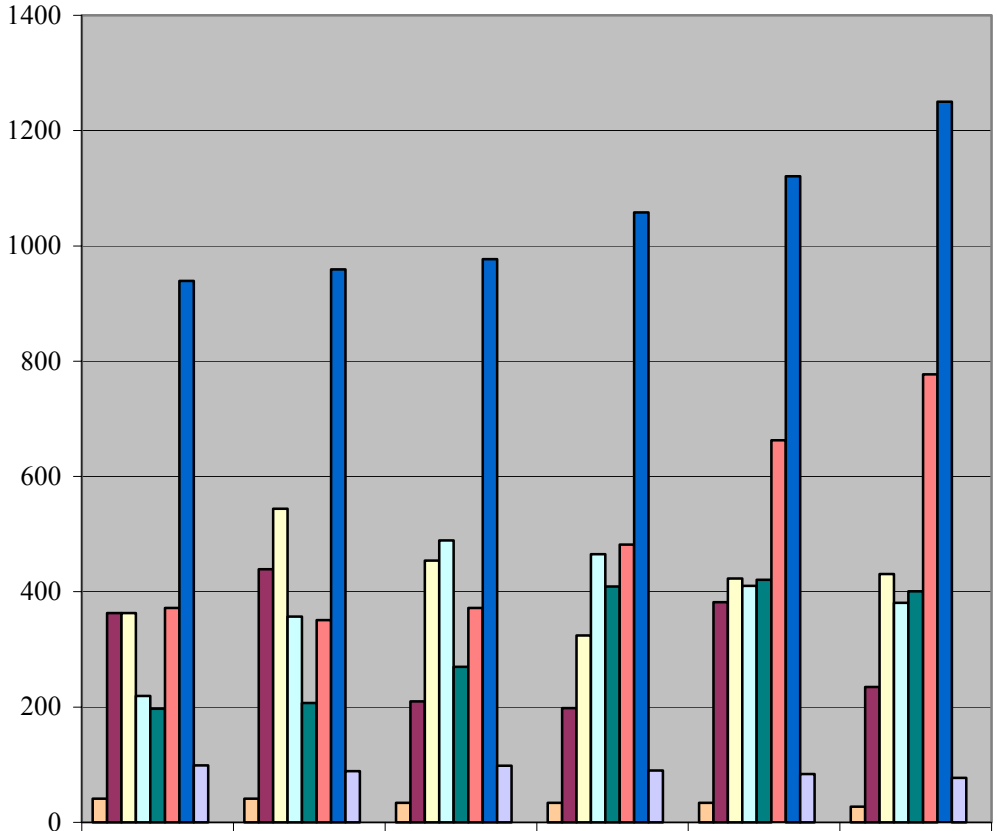
Source: PTO's Patent Production Model

Appendix 2. Quality Review Organizational Chart



Source: PTO management

Appendix 3. Number of Examiners by Grade Level for Fiscal Years 1998 – 2003



	1998	1999	2000	2001	2002	2003
GS-5	41	41	34	34	34	27
GS-7	363	439	210	198	382	235
GS-9	363	544	454	324	423	431
GS-11	219	357	489	465	410	381
GS-12	197	207	270	409	421	401
GS-13	372	351	372	482	663	777
GS-14	939	959	977	1058	1121	1250
GS-15	99	89	98	90	84	77
Total (Patent Corps)	2593	2987	2904	3060	3538	3579

Source: PTO Management

Appendix 4. Patent Corps Performance Appraisal Plans

PAP Weights	Probationary Examiner		GS 5-13 Examiner		GS 13 Partial Signatory Authority Examiner		GS 13-15 Full Signatory Authority Examiner	
	Former	Current	Former	Current	Former	Current	Former	Current
Patent Examining Function	90	80	45	35	30	25	10	10
Action Taking					15	15	15	10
Patentability Determination							20	20
Customer Service*		10		10		10		10
Production Goal Achievement			45	45	45	40	45	40
Workflow Management	10	10	10	10	10	10	10	10

*The Customer Service Element was added in 2001.

GS 15 Supervisory Patent Examiner				Technology Center Director			
Former		Current		Former		Current	
Examining Quality	25	**Quality of Examiner Products**	20	**Quality of Products**	20	**Program/Mission Accomplishment**	50
		Quality of Examiner Services	15	**Processing Times and Productivity**	35		
Examining Productivity	25	**Processing Times and Productivity**	35	**Customer/ Client Service Responsiveness**	15		20
Patent Pendency	20						
Effective Leadership	15	**Effective Leadership including Employee Satisfaction**	30	**Leadership/ Management**	30		30
Diversity Management	15						

Source: PTO 2001 Initiatives for a New Millenium and Patent Corps Performance Appraisal Plans

Appendix 5. Workflow Management Criteria

Criteria for Evaluation * = Elements OIG determined related to pendency reduction.	Processing Time Requirement	Recommended Processing Time	Points deducted for 1st failure to comply	Points deducted 2nd and subsequent failure to comply	Bonus points drafted for excellence
1. Handles reexamination procedures	Follows priority and timing specified in the Manual of Patent Examining Procedure (MPEP)	None	-3	-5	
2. Acts on reissue applications involved in litigation	Next available case after expiration of two months from the Official Gazette (OG) notice		-3	-5	
3. Acts on Patent Cooperation Treaty applications	Follows priority and timing specified in MPEP		-3	-5	
4. Acts on applications made special by petition	Next available case examiner acts on		-3	-5	
5. Acts on reissue applications not involved in litigation	Next available case after expiration of two months from OG notice		-3	-5	
6. Responds to post-final rejection amendments or communications	Within 10 calendar days after receipt by the examiner	Mailed within 30 days of their receipt in the office	-2	-2	+0.5
7. Responds to non-final rejection amendments or communications *	Within 2 months after receipt by the examiner	Within 1 month of their receipt by the examiner	-1	-1	+0.2
8. Responds to appeal briefs *	Within 2 months after receipt by the examiner		-1	-1	+0.2
9. Acts on new applications with the oldest effective filing date *	By the end of every other pay period	Completed for credit by the end of every other pay period	-1	-1	+0.5
10. Acts on new application with the oldest actual filing date *	By the end of every other pay period		-1	-1	+0.5

11. Processes and/or handles responses under 37 CFR 1.312	Promptly		-1	-1	
12. Processes and/or handles printer waiting cases	Within the time period established for the particular case		-1	-1	
13. Processes and/or handles the signing and/or proofreading of office communications for mailing and/or correction	Promptly		-1	-1	
14. Complies with the proper conduct of interviews and/or contact with the public	Promptly and in compliance with office policy	Throughout the entire quarter or equivalent thereof during the rating period	-4	-6	+1
15. Frequently provides consultation services to the public and peers		Frequently throughout the entire quarter or equivalent thereof during rating period			+0.5
16. All typed office communications are promptly processed and mailed within 30 days from the submission for credit by examiner *		Mailed within 30 days from the submission for credit by the examiner throughout the quarter or equivalent thereof during rating period			+0.5
17. All typed office communications are promptly processed and mailed within 15 days from the submission for credit by examiner *		Mailed within 15 days from the submission for credit by the examiner throughout the quarter or equivalent thereof during rating period			+0.5

Source: *Guidelines for PAP*, August 1987.

Appendix 6. Agency Response to Draft Report

UNITED STATES PATENT AND TRADEMARK OFFICE

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

SEP 30 2004

MEMORANDUM FOR Jill Gross
Assistant Inspector General for
Inspections and Program Evaluations

FROM: Jon W. Dudas sp for JD
Under Secretary and Director

SUBJECT: Response to Draft Report No. IPE-15722:
"*United States Patent and Trademark Office: USPTO Should Reassess How Examiner Goals, Performance Appraisal Plans, and the Award System Stimulate and Reward Examiner Production*"

We appreciate the effort your staff has made in evaluating the effectiveness of our patent examiner goals, performance appraisal plans, and award system. We have carefully considered the three recommendations made in the subject draft report. We concur with the recommendations and will reassess our current examiners' goals, performance appraisal plans, and award system and their effectiveness in stimulating and rewarding examiner production as well as their effectiveness in achieving the objectives of the USPTO's *21st Century Strategic Plan*.

IG Recommendation (1): Reevaluate current patent examiner goals and assess the merits of revising them to reflect efficiencies in and changes to work processes resulting from automation and other enhancements.

USPTO Response:

The agency agrees that current patent examiners' goals should be reevaluated to assess the merit of revising them to reflect changes in work processes. Our agreement with the conclusion is not a result of complete concurrence with the analysis and rationale set forth in the report. However, we agree that changes have occurred, and more are planned in connection with the implementation of the *21st Century Strategic Plan*, and thus we have already begun the reassessment of the current goal system. Examination quality, as well as efficiency and productivity, is basic to the *21st Century Strategic Plan*. A properly designed goal system is essential to achieving the long-term objectives the USPTO has set forth. Any changes to examiners' goals need to be linked effectively to changes in award programs and performance appraisal plans. Any changes made must be done without

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undermining customer confidence in the quality of Office work products, using the best advice and practices available.

IG Recommendation (2): Examine the benefits of revising patent examiner performance plans to: (a) better reflect agency production, first action and overall pendency goals; and (b) better measure examiner success at processing applications within specified time periods.

USPTO Response:

The agency has recognized and agrees that the patent examiner Performance Appraisal Plan (PAP) should be examined to determine potential revisions to the timeliness critical element, "Workflow Management", to better link the criteria for evaluation to the USPTO pendency goals. It should be noted that for several of the categories under this performance element, the current PAP standards are stricter than the time periods set forth in the American Inventors Protection Act (e.g., processing applicant responses and decisions after appeal). We have begun the review of the "Workflow Management" element and will be considering changes along the lines suggested in the report. We will review the GAO findings referred to in this report and the changes proposed in the Trademark examining attorneys' performance plans, as suggested, to find ways to better link agency performance to individual performance. As is noted in the report, any changes to the PAP, as well as to the production and award system, may be subject to negotiations with the bargaining unit representatives before implementation.

IG Recommendation (3): Evaluate the current patent examiner award system to determine if there is a more effective and efficient way to stimulate higher examiner production.

USPTO Response:

The agency agrees that the current patent examiner award system should be reevaluated to ensure that it provides the most effective way to stimulate examiner production. Government-wide changes in overtime pay rates implemented this year have caused the agency to study the restructuring of our award programs. Consideration will be given to the relationship between current programs, and to changing award level increments/payouts to stimulate greater interest in higher achievement. Examiner historical trends and examiners' motivation to achieve production award levels will be examined and best practices adapted to stimulate and reward examiners who contribute to the agency goals of high quality, efficient examination.

Again, we thank the Assistant Inspector General for Inspections and Program Evaluations for the report. We intend to meet the recommendations in a diligent manner, and we will gratefully accept suggestions as we move forward to ensure that an effective system is in place that will enable us to attain the needs of the United States Patent and Trademark Office.

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