Examination Time and the Production System

United States Patent and Trademark Office
EXAMINATION TIME ANALYSIS: Why?

We will establish the optimal pendency and quality levels for both patents and trademarks that will enable us to operate efficiently and effectively in a steady-state maintenance mode, while considering the expectations of the IP community. –USPTO Strategic Plan 2014-2018
Examination Time Analysis: Why now?

• Properly calibrated examination time is critical for establishing optimal pendency and quality levels

• Patent prosecution has substantially changed since goals were established. For example:
  – New technologies and increased technological complexity
  – Exponential growth of available prior art
  – Transition to the Cooperative Patent Classification (CPC)
  – Increased use of Electronic tools
  – Changes in policy and legal interpretations
Although modest adjustments have been made to examination time over the years, there has not been a comprehensive reevaluation of examination time since the current expectancies were established.

Recent reports by oversight bodies such as the General Accounting Office and Office of the Inspector General have recommended that the USPTO reevaluate examination time.
The Patent Model

• Simulation tool that predicts pendency, workload and output
• Used to plan hiring and other factors to ensure that pendency goals are met and to project revenue and costs
Patent Model (cont.)

Key Variables

- Filings
- Examiner attrition
- Examiner hiring
- Overtime
- Examining Resource Investments
  - Quality investments such as examiner training time and additional examining time to support quality efforts

Predicted Outputs

- Future staffing levels
- Total production
- Application inventories
- Pendency

The patent model inputs projected application filings and examiner attrition as well as management decisions on hiring, overtime and special programs including quality initiatives and training. The resulting outputs are staffing, total production, application inventories and pendency. Individual examiner production goals are a critical determinant of how the key inputs relate to the key outputs.
Hypothetical data showing how examination time relates to projected pendency according to the Patent Model. Pendency can be maintained at baseline by adjusting Key Inputs such as Hiring.
Examination Time Goals and Examiner Evaluation
Patent examination is comprised of a variety of tasks, each of which consume a greater or lesser share, on average, of the total time required to examine an application.
Examiner Performance Appraisal Plan

Examiner performance is rated on:

– **35% Productivity**: Number of office actions / period of time
– **35% Quality**: Quality of those actions
– **20% Docket Management**: Completing those actions within expected timeframe
– **10% Stakeholder Interaction**: Internal and external contacts

The Examiner Performance Appraisal Plan provides a means to measure examiners’ performance and provide feedback on improving performance. Examiners receive an overall annual performance rating based on a weighted average of performance in three critical elements: Production, Docket Management, and Quality and a customer service element referred to as “Stakeholder Interaction”.
Production Goal Calculation: Expected Production Units For 100% of Goal

\[
\frac{(\# \text{ of Examining Hours}) \times (\text{Seniority Factor})}{(\text{Technology Complexity})} = \text{Number of PUs* Needed For 100% of Goal}
\]

* "PU" is the abbreviation for a "Production Unit". A Production Unit is equal to 2 "counts".

Performance under the Production element is assessed based on actual Production Units achieved relative to the Examiner’s production goal. The production goal is calculated for each examiner based on the number of “Examining Hours” worked in the evaluation period and quantitative values assigned to examiner seniority and complexity of the technology examined.
Each serial new (i.e., non-RCE) application carries 1 PU or 2.0 counts, a fraction of which is awarded for each major Office Action type. The distribution of count credit is structured to incentivize a thorough and complete first action on the merits by awarding most of the PU at first action and less credit for follow-on actions. No credit is given for rework (e.g., 2nd non-final). In most but not all cases, RCEs carry a fraction of a PU (e.g., 1.75 counts) and the credit for a first action is reduced by a corresponding amount.
Production Goal Calculation: Expected Production Units For 100% of Goal

\[
\text{(Number of PUs* Needed For 100\% of Goal)} = \frac{\text{(\# of Examining Hours)} \times \text{(Seniority Factor)}}{\text{(Technology Complexity)}}
\]

*A “Production Unit“ or PU equals 2 Counts

Performance under the Production element is assessed based on actual Production Units achieved relative to the Examiner’s production goal. The production goal is calculated for each examiner based on the number of “Examining Hours” worked in the evaluation period and quantitative values assigned to examiner seniority and complexity of the technology examined.
Production Goal Calculation: Examining Hours

**Includes**

- All major examination activities
  - Reviewing the application
  - Analyzing the claims
  - Searching the prior art
  - Considering prior art (including IDS)
  - Consulting with colleagues
  - Writing office actions
  - Addressing applicant’s responses
- Administrative activities (e.g., reading and responding to e-mail).

**Excludes**

- Leave and holidays
- Training
- Staff meetings
- Programs where examiners receive additional time (AFCP 2.0, QPIDS, etc.)

Excluding Hours are a subset of an examiner’s compensated time. Generally, activities that directly relate to examination of an application and generation of a production unit are included as Examining Hours. Leave and activities such as training and general staff meetings are excluded. In addition, activities performed under some special programs are excluded from Examining Hours.
Production Goal Calculation: Expected Production Units For 100% of Goal

\[
\frac{(\# \text{ of Examining Hours}) \times (Seniority Factor)}{(Technology Complexity)} = \text{Number of PUs* Needed For 100% of Goal}
\]

*A “Production Unit” or PU equals 2 Counts

Performance under the Production element is assessed based on actual Production Units achieved relative to the Examiner’s production goal. The production goal is calculated for each examiner based on the number of “Examining Hours” worked in the evaluation period and quantitative values assigned to examiner seniority and complexity of the technology examined.
Production Goal Calculation: Technology Complexity

- The **Technology Complexity** of an application designates a baseline amount of time per application. For example:

  - **16.6 hours/PU**
    - Fishing lures
  - **25.9 hours/PU**
    - Immunotherapy
  - **27.7 hours/PU**
    - Satellite communication

Each application carries a classification with an associated unadjusted expectancy based on the complexity of technologies within that classification. Associated unadjusted expectancies range from 13.8 hours/PU to 31.6 hours/PU for utility applications. These unadjusted expectancies are adjusted based on the examiner’s seniority.
Production Goal Calculation: Expected Production Units For 100% of Goal

\[
\text{(Number of PUs\* Needed For 100\% of Goal)} = \frac{\text{(Examine Hours)} \times \text{(Seniority Factor)}}{\text{(Technology Complexity)}}
\]

*A "Production Unit“ or PU equals 2 Counts

Performance under the Production element is assessed based on actual Production Units achieved relative to the Examiner’s production goal. The production goal is calculated for each examiner based on the number of “Examining Hours” worked in the evaluation period and quantitative values assigned to examiner seniority and complexity of the technology examined.
As the seniority of the examiner increases, reflected by their GS level, their seniority factor also increases, which amounts to more production as experience increases.
Example: 100% Bi-Weekly Production Goal for GS-7, GS-12 and GS-14 Utility Examiners:

All three examiners have the same number of examining hours (72) and examine in an area with the same Technology Complexity (16.6 hours/PU):

GS-7: \[
\frac{72 \times 0.7}{16.6} = 3.0 \text{ PU} \times 2 = 6.0 \text{ counts (for 100% production)}
\]

GS-12: \[
\frac{72 \times 1.0}{16.6} = 4.3 \text{ PU} \times 2 = 8.6 \text{ counts}
\]

GS-14: \[
\frac{72 \times 1.35}{16.6} = 5.9 \text{ PU} \times 2 = 11.8 \text{ counts}
\]
Example: Bi-Weekly Production Goal Calculation:

• The Technology Complexity for class 43 (Fishing, Trapping, and Vermin Destroying) is 16.6 hours per PU.

• A GS-14 examiner working in class 43 has 72 hours of examining time in a two week pay period.

• From the previous slide, we know that the examiner is required to complete 5.9 PUs (11.8 counts) to achieve 100% of his goal.

• The examiner actually completes:
  
  6 final rejections: 6 x 0.25 counts = 1.5 counts
  4 allowances: 4 x 0.50 counts = 2.0 counts
  6 first actions: 6 x 1.25 counts = 7.5 counts
  2 advisory actions: no counts
  1 non-final 2nd action: no counts
  3 abandonments: 3 x 0.50 counts = 1.5 counts
  
  TOTAL: 12.5 counts (6.25 PUs)

• Finally, the examiner’s achievement is calculated by dividing the actual PUs completed by the expected PUs:

  6.25 actual PUs completed/5.9 PUs expected = 107%
The examiner production system is a complex arrangement of goals and incentives. The current base production expectancies were established nearly 40 years ago and there has not been a comprehensive reassessment of those expectancies since they were established. Production expectancies are integral to many aspects of patent operations including quality, pendency and cost.
USPTO’s Request for Comments on Examination Time Goals Federal Register Notice

Quality in complex technologies
(1) Do you perceive a difference in the quality of examination performed in complex technologies compared to less complex technologies? If yes, which do you perceive as higher quality and why? In what aspect(s) is the quality of examination higher?

Estimating time for prosecution
(2) What factors do you consider when estimating the amount of time needed to take various steps in prosecution, such as preparing responses to Office actions or preparing for interviews? In particular, if you prosecute applications in a variety of technology areas, how do those factors vary among the technologies?

Complexity of prosecution
(3) Are the applications you prosecute more or less complex than in the past, e.g., 10 years ago? What factors contribute to the increase or decrease in complexity? Do you believe the increase or decrease in complexity has affected the amount of time it takes to prosecute the applications? If so, by how much? Do you believe the increase or decrease in complexity has affected the quality of examination? If so, how?

Examination Activities
(4) In order to increase the quality of examination, do you believe that an increase in the time allotted for examination should be designated for specific activities, such as interviews, or left to the discretion of the examiner? What activities would you prioritize and allocate more time to?

Value or quality of portions of office actions
(5) Are there any portions of Office actions which you feel do not add value or quality to the examination? If yes, what are they?

Non-Examination Activities
(6) What other activities beyond examining, such as research or training, could examiners spend time on that would add value? Why do you believe these activities could add value?

Cost, pendency, and time
(7) While the focus of this request for comments and the roundtables is to find the appropriate amount of time for examination, cost and pendency are also contributing factors. Do these factors raise a concern that should be considered?
• More information at the ETA website - https://www.uspto.gov/patent/initiatives/eta-external-outreach

• Send your feedback to: ExternalExaminationTimeStudy@USPTO.GOV