



USPTO Patent Quality Composite

presented to
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Background

- **Goal: To identify, measure, and track meaningful indicia of patent examination quality**
- **Collaborative effort with Patent Public Advisory Committee (PPAC) that started in 2009**
- **Consulted a wide range of sources pertaining to patent examination, quality metrics, and performance monitoring**
 - ✓ Key USPTO statistics, USPTO initiatives, patent-related blogs, PPAC outreach, applicant and practitioner surveys, foreign offices, USPTO and non-USPTO quality studies, public comments
- **Three key themes emerged:**
 - ✓ Measure quality throughout the examination process rather than solely at the endpoint of prosecution of the application
 - ✓ Provide a balanced measure to address errors of both allowance and rejection
 - ✓ Place emphasis on compliance with procedures early in the prosecution of applications, such as search and restriction practice
- **Identified five (5) new quality metrics to be used in conjunction with the two (2) historic measures of patent examination quality**
 - ✓ Old: Final Disposition Compliance Rate; In-Process Compliance Rate
 - ✓ New: FAOM Search; Complete FAOM Review; Quality Index Reporting (QIR); External Quality Survey; Internal Quality Survey
- **Patent Quality Composite implemented in October 2010**



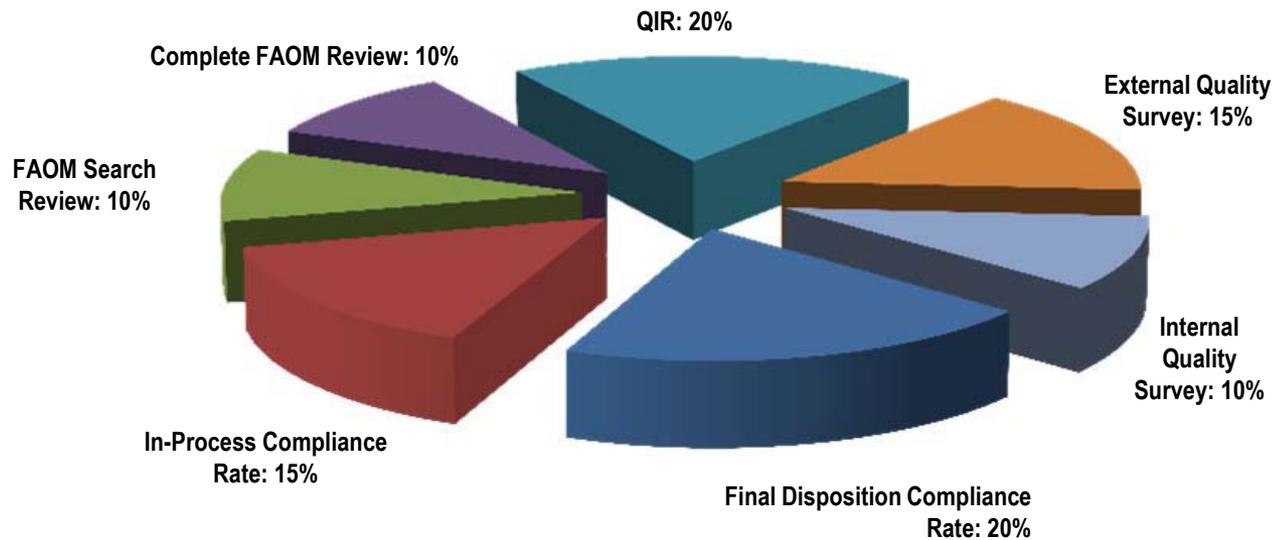
Why a Composite?

- **Lack of widely-accepted single definition of “patent examination quality”**
- **Multiple metrics can lead to information overload**
 - ✓ Users want to quickly understand the bottom-line; one measure that communicates all of the unique components
 - ✓ USPTO also has several performance measures related to pendency and production for both the Patent and Trademark operations
- **Provides a balanced perspective**
 - ✓ Consistently communicates both improvements and declines for all items
 - ✓ Eliminates trap of wanting to advertise only those items that support a particular position
- **Sensitive to detecting unintended consequences of driving improvement in limited areas**
 - ✓ Balloon effect; don’t want to just push the poor quality elsewhere
- **Assists in allocation of resources for improvement strategies**
 - ✓ What is going to provide the greatest return on investment (ROI)?
- **Increases confidence in overall assessment of organization’s performance**



Patent Quality Composite

Each component has a specific weight in the composite.





Patent Quality Composite

Components

- **Final Disposition Compliance Rate (20%)**

- ✓ Historic measure of patent examination quality
- ✓ Measures propriety of final dispositions of patent applications
- ✓ Based on review of randomly-sampled Allowances and Final Rejections.
- ✓ N=3,000 reviews per Fiscal Year; 95% confidence interval +/- 0.75%

- **In-Process Compliance Rate (15%)**

- ✓ Historic measure of patent examination quality
- ✓ Measures propriety of Office actions on the merits during the prosecution
- ✓ Based on review of randomly-sampled Non-Final Rejections.
- ✓ N=3,000 reviews per Fiscal Year; 95% confidence interval +/- 0.75%

- **Quality Index Reporting – QIR (20%)**

- ✓ Built in FY09
- ✓ Statistical representation of quality-related events in the prosecution of the patent application
- ✓ PALM data tracked on a biweekly basis for each examiner. Contains over 85 variables.
- ✓ Items tracked for Quality Composite include: Actions per Disposal; % Disposals not RCE; % Finals Reopened; 2nd+ Action Non-Finals; Restrictions Made on 2nd or Subsequent Action
- ✓ Objective metrics; no sampling error



Patent Quality Composite

Components *continued*

- **FAOM Search (10%) and Complete FAOM Review (10%)**
 - ✓ New in FY11
 - ✓ Measures degree to which the search and the first action on the merits conforms with the best practices of the USPTO
 - ✓ Based on randomly-selected review of FAOMs and First Action Allowances
 - ✓ In-depth review where applications are evaluated against a checklist of best practices based upon USPTO experience and stakeholder input
 - ✓ Actions receive an exam-type score based upon their compliance with best practices
 - ✓ N=800 reviews per Fiscal Year for each component
- **External Quality Survey (15%)**
 - ✓ Conducted by external survey research firm since 2006
 - ✓ Measures satisfaction of applicants and practitioners with patent examination quality
 - ✓ Metric expressed as ratio of satisfied respondents versus dissatisfied respondents
 - ✓ Semi-annual survey of approximately 3,000 frequent-filing applicants and practitioners
- **Internal Quality Survey (10%)**
 - ✓ New in FY11; conducted by external survey research firm
 - ✓ Measures employee satisfaction with various factors and inputs that lead to the ability to perform high quality examination
 - ✓ Metric expressed as ratio of satisfied respondents versus dissatisfied respondents
 - ✓ Semi-annual survey of approximately 750 examiners



Patent Quality Composite

Key Concepts

- Metric is designed to express % progression towards a stretch goal.
- Stretch goal is Fiscal Year (FY) 2015 expectations.
- Interim FY targets set to ensure progression towards meeting 100% of FY15 expectations.
- Desired progression is from a set “base” period, FY09
 - ✓ New items introduced with the composite have a baseline of FY11
- Why measure progress from end of FY09 through FY15?
 - ✓ Covers period included in current USPTO Strategic Plan
- Progression at any given time is a cumulative measure from the base period; composite will also reflect set-backs that result from less-than-desirable performance.
- 7 unique components. Progress in each component is measured and then a weighted average of all 7 items is computed to determine overall progression.



Patent Quality Composite

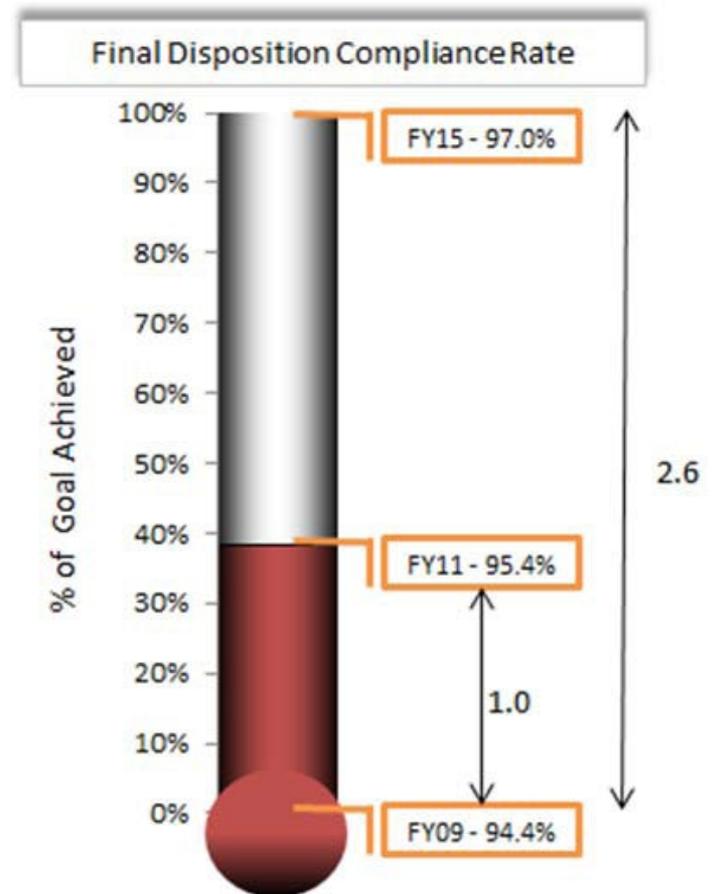
Measuring Progression of Each Component

Desired improvement is defined as distance (range) between a base period and FY15 stretch goal

Performance at end of each FY is compared to total desired distance and expressed as a % progression towards goal.

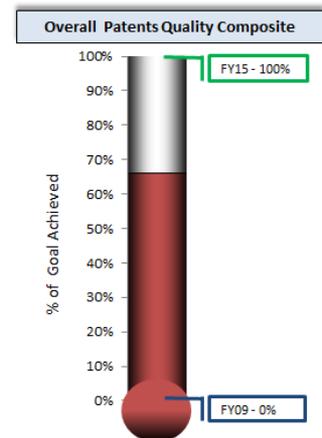
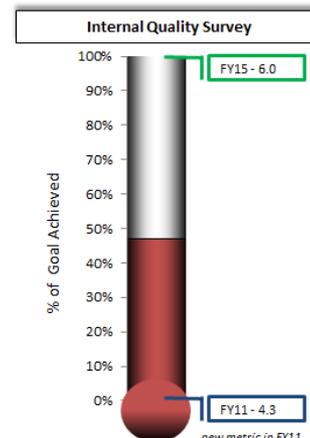
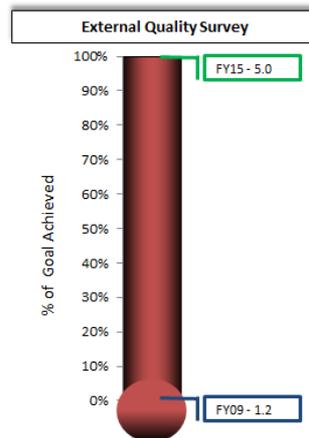
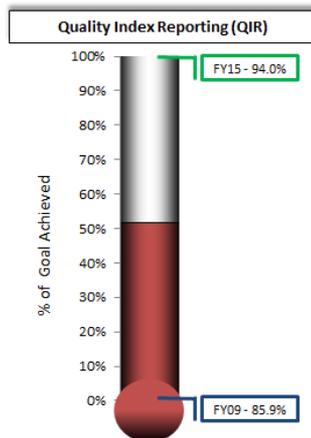
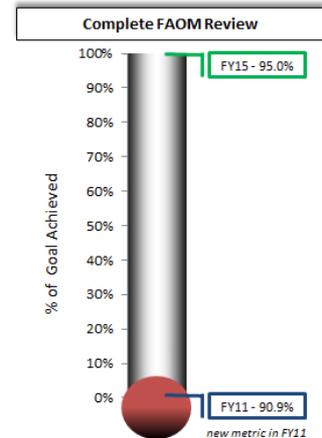
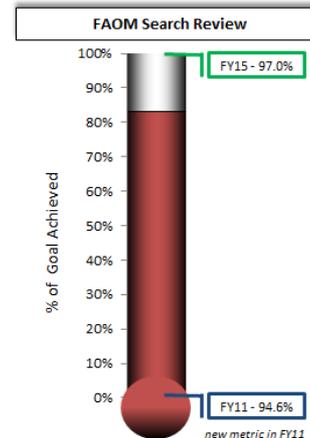
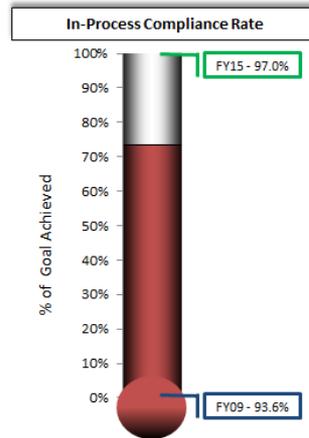
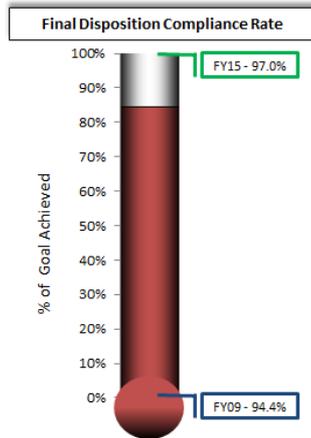
Example: Final Disposition Compliance Rate

- FY15 stretch goal is 97%
- Baseline measure (FY09 level) was 94.4%
- Total distance (range) between baseline and goal is 2.6%
(97.0% – 94.4% = 2.6%)
- FY11 actual was 95.4%
- Total net progression at end of FY11 reporting period was 1.0%
Actual FY11 (95.4%) – Baseline (94.4%) = 1.0%
- % progression towards stretch goal: 38.5%
Net Progression (1.0%) / Desired Progression (2.6%) = 38.5%





Patent Quality Composite





Patent Quality Composite

Combining Component Progress to Determine Overall Progress

Since each component is normalized to represent a % progression from its base period to its FY15 stretch goal, they can be combined to depict USPTO's overall progress in meeting its FY15 Strategic Plan quality goal.

Each component has a specific weight in the composite so the combination of components requires a weighted average.

Final Disposition Compliance Rate *Progress* * 20%
+ In Process Compliance Rate *Progress* * 15%
+ FAOM Search Review *Progress* * 10%
+ Complete FAOM Review *Progress* * 10%
+ QIR *Progress* * 20%
+ External Quality Survey *Progress* * 15%
+ Internal Quality Survey *Progress* * 10%
= **Quality Composite Score**



Patent Quality Composite

Component Metric	Definition	Component Weight (sum to 100) W_o	Base Year B_o	Stretch Goal [Expiration of Strategic Plan: FY15] S_o	Current Level FY12 Q3 C_t	Component Score $((C_t - B_o) / (S_o - B_o)) * 100$ [Progression from Base Year to Stretch Goal, with 0=Base Year] CS_t
A. Final Disposition Compliance	12-month % Compliance as determined by OPQA random-sample-review of Allowances and Final Office Actions.	20%	94.4	97.0	96.6	84.6
B. In-Process Compliance Rate	12-month % Compliance as determined by OPQA random-sample-review of Non-Final Office Actions.	15%	93.6	97.0	96.1	73.5
C. FAOM Search Review	12-Month Average Score as determined by OPQA random-sample, points-based-review of examiner-conducted search. Score= Points Earned/Available Points.	10%	94.6	97.0	96.6	83.3
D. Complete FAOM Review	12-Month Average Score as determined by OPQA random-sample, points-based-review of First Actions on the Merits (FAOMs). Score= Points Earned/Available Points.	10%	90.9	95.0	90.8	-2.4
E. QIR	12-month average of 5 Quality Index Reporting metrics ^{bl} being tracked for quality performance. Converted to "% desired behavior" for inclusion in Composite. Each unique item has 4% of total Composite weight (20/5).	20%	85.9	94.0	90.1	51.9
F. External Quality Survey	Data collected from semi-annual External Quality Survey administered to a random sample of applicants and practitioners. Metric is number of respondents reporting "Good" or "Excellent" quality for every single respondent that reports quality as "Poor" or "Very Poor" over the previous 3 months. Responses of "Fair" are excluded from the analysis.	15%	1.2	5.0	5.0	100.0
G. Internal Quality Survey	Data collected from semi-annual Internal Quality Survey administered to a random sample of patent examiners. Metric is number of respondents reporting "Good" or "Excellent" for every single respondent that reports "Poor" or "Very Poor" when asked about factors impacting their ability to provide high-quality patent examination. Responses of "Fair" are excluded from the analysis.	10%	4.3	6.0	5.1	47.1

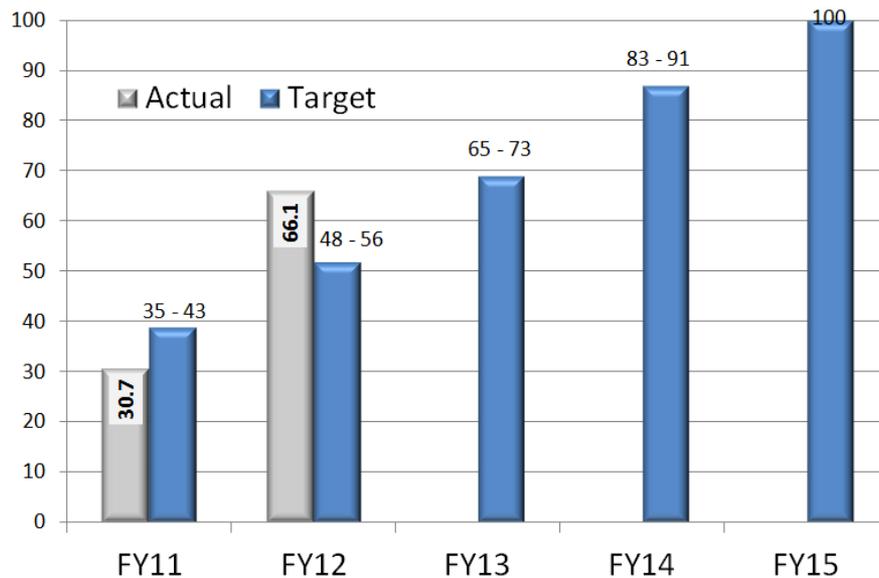
Patents Quality Composite Score: 66.1



Patent Quality Composite

Monitoring Continuous Improvement

The Quality Composite Score in any given FY represents total cumulative progress towards meeting the FY15 quality goals. FY targets for desired progress throughout the Strategic Plan period have been established to evaluate interim performance and track year-to-year changes.



FY12Q3 indication of 66.1 means that the Office is currently 66.1% of the way in meeting the quality objectives it plans to achieve by the end of FY15.



Patent Quality Composite

The Quality Composite Score and the current indications for each of the components are updated quarterly on the USPTO Dashboard.

<http://www.uspto.gov/dashboards/patents/main.dashxml>

Please note that only the Quality Composite Score is represented as % of Progress on the Dashboard. The individual components are displayed as measured and must be compared to their respective baseline and stretch levels to determine % progress.

