

Digital Transformation of the Legal Industry Webinar Series

SLW Digital Transformation Case Study: Application Preparation – Disclosure Intake and Docketing, Application Drafting Tools, Production Management

Webinar Series

Episode 01 – What is Digital Transformation for Law Practices?

Thursday, February 11th, 2021 at 12:00 PM CT

Episode 02 – SLW Digital Transformation Case Study: Overview of SLW systems, tools, data lake, processes, teams and personnel.

Thursday, March 11th, 2021 at 12:00 PM CT

Episode 03 – SLW Digital Transformation Case Study: Application Preparation – Disclosure intake and docketing, application drafting tools, production management

Thursday, April 8th, 2021 at 12:00 PM CT

Episode 04 – SLW Digital Transformation Case Study: Prosecution I – Receiving & Reporting PTO Correspondence – docketing, data/document storage, work packets, drafting and filing papers and responses; reporting to clients

Thursday, May 13th, 2021 at 12:00 PM CT

Episode 05 – SLW Digital Transformation Case Study: Prosecution II – Claim tracking, reference analysis tools and reports, prosecution landscape tools and reports, examiner/prosecution analytics, IDS management

Thursday, June 10th, 2021 at 12:00 PM CT

Episode 06 – SLW Digital Transformation Case Study: Due Diligence, Freedom to Operate Studies, Landscape Studies, Portfolio Curation, Portfolio Analytics, Landscape Analytics, Examiner and Attorney Analytics

Thursday, July 8th, 2021 at 12:00 PM CT

Before We Get Started...



Recording

A link to the recording and slides will be emailed to all registrants.



Questions

Type in the question box and we will answer in real time or during the Q&A.



Social

Follow us on LinkedIn or go to slwip.com to see upcoming and on demand webinars.

Today's Presenters...



Steve Lundberg

Principal & Chief
Innovation Officer
Schwegman Lundberg &
Woessner



Andre Marais

Principal
Schwegman Lundberg
& Woessner



Greg Rabin

Senior Attorney
Schwegman Lundberg
& Woessner




Bill Kalweit

Principal
Schwegman Lundberg
& Woessner



Chris Palmisano

Principal
Schwegman Lundberg
& Woessner



Digital Transformation Application Intake

- Error prone process
- Requests for application work typically provided by e-mail
- Data rekeyed every time – easy to make mistakes, expensive, slow
- Every client has different process and different form

SLW Solution to Application Intake

- SLW has developed data extraction tools that analyze client forms and e-mails and extracts the data into a structured format like an XML file
- XML file can be parsed into our FoundationIP system and also into our data lake
- Also, each large client has customized process templates that launch in FoundationIP to provide the milestones we need to meet for filing on time per client instructions
- Developing automated analytics process to provide key analytics data to drafting attorney in addition to any information provided by client

Drafting Tools

Rowan Patents/ TurboPatent

Patent Drafter (Harrity)

Patent Bots

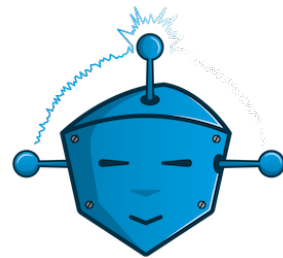
Clorganize

Claim Master

Patent Optimizer[®] & Patent Advisor[®] (Art Unit

Predictor) (LexisNexis[®])

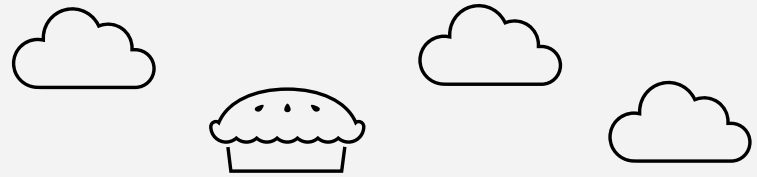
ClaimMaster



TURBO
PATENT



Drafting Tools: Rowan Patents aka TurboPatent



What is Rowan Patents?

“Rowan Patents uses automation and AI to unburden patent practitioners from time-consuming duties so they can focus on drafting claims, capturing the invention, and generating a quality work product.”

Drafting Tools: Rowan Patents aka TurboPatent

- A robust **word processing tool** integrated with a **drawing tool**
- **AI for issue spotting in completed draft**

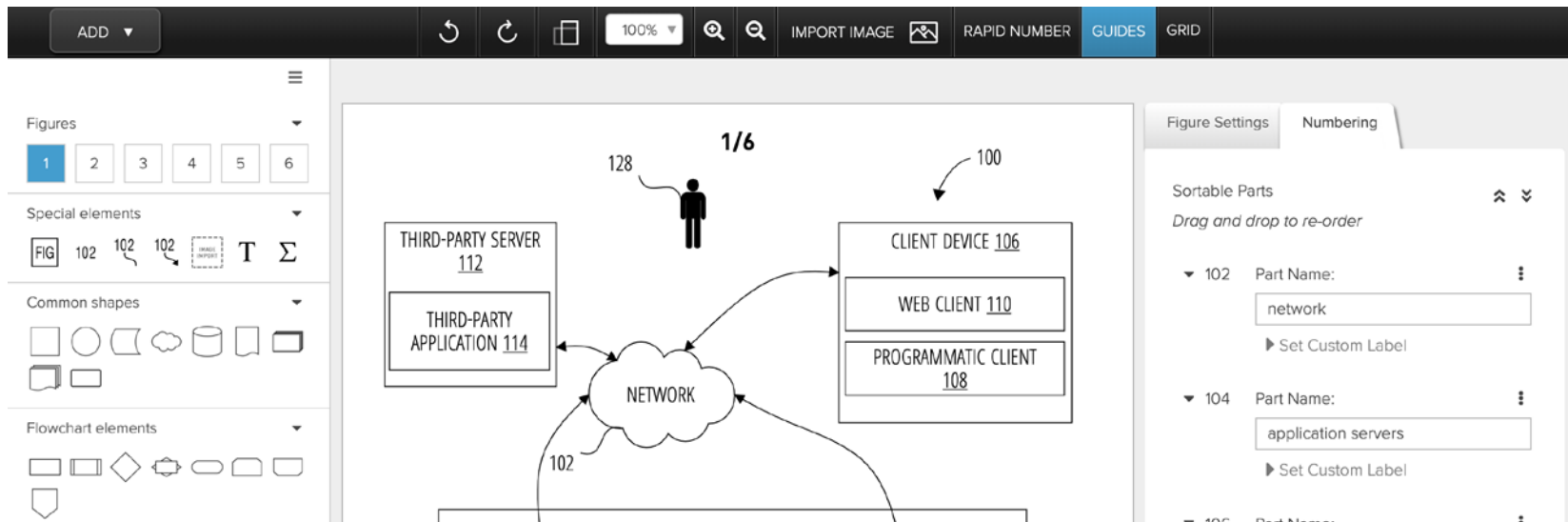
The screenshot displays the TurboPatent drafting tool interface. At the top is a horizontal toolbar with five main sections: 1. An orange '+ Add' button and undo/redo icons. 2. A 'FONT' section with 'Normal Text' and formatting options (Bold, Italic, Underline, Strikethrough, Subscript, Superscript). 3. A 'PARAGRAPH' section with alignment and bullet/numbering options. 4. An 'INSERT' section with icons for image, link, table of contents, and table. 5. A 'CLAIMS' section with a 'Generate' button. To the right of these are 'COMMENTS & SUGGESTIONS' icons and a dropdown arrow.

Below the toolbar is a left-hand sidebar with a menu. The 'Title' item is highlighted in blue. Other menu items include 'Docket Number', 'Cross Reference', 'Background', 'Summary', 'Brief Description of Figures', 'Detailed Description' (which is expanded to show 'Introduction', 'FIG. 1', 'FIG. 2', and 'FIG. 3'), and a small 'v' icon at the bottom.

The main drafting area on the right contains three input fields: 'Title' with a placeholder '[TITLE]', 'Docket number' with a placeholder '[FILE NUMBER]', and 'Cross reference'. The 'Cross reference' field is currently empty and contains the text 'CROSS-REFERENCE TO RELATED APPLICATIONS' at the bottom.

Drafting Tools: Rowan Patents aka TurboPatent

- A word processing tool integrated with a **drawing tool**



Drafting Tools: Rowan Patents aka TurboPatent



Why is it helpful for text and drawing tools to share information?

- More consistent term usage throughout specification
- No numbering errors or duplicates
- Better textflow, correspondence between texts and figures (more efficient inventor review)

Most importantly...

- On-the-fly rearrangement of text and figures with automatic re-numbering

Drafting Tools: Rowan Patents aka TurboPatent

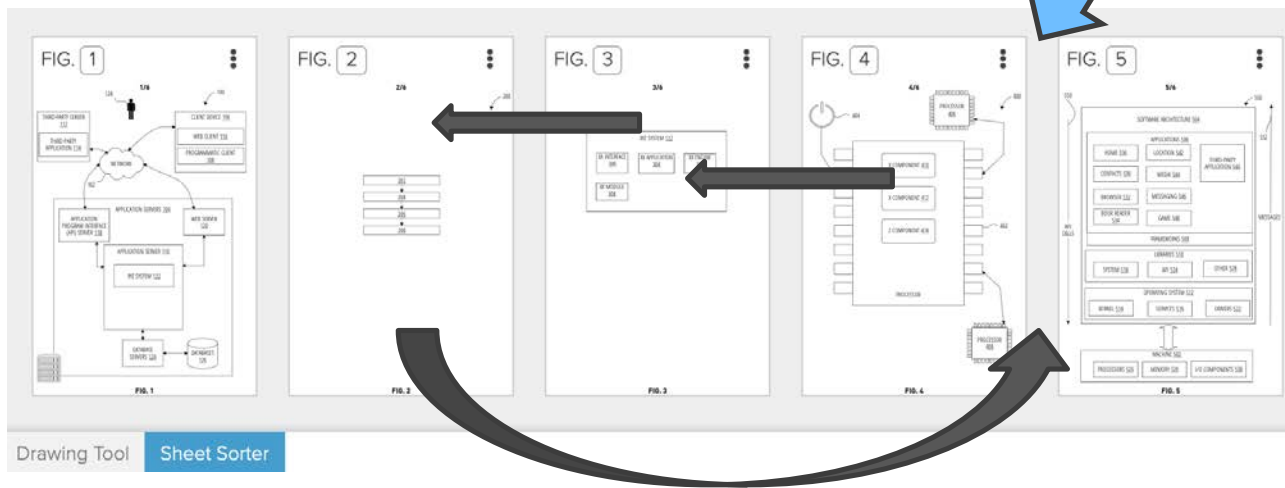
Easily add / move / remove Figures and Text:

(2) Fig. 3 becomes Fig. 2

(3) Fig. 4 becomes Fig. 3



*Client-Specific
Templates*



(1) Move Fig. 2 to become Fig. 4 (e.g., References 2xx become 4xx)

Drafting Tools: Rowan Patents aka TurboPatent



- A robust word processing tool integrated with a **drawing tool**
- **AI for issue spotting in completed draft**

Predictive Analytics Report

This is a web-based report and contains

- ✓ Art Unit Prediction
- ✓ 101 Rejection Assessment
- ✓ 102/103 Rejection Assessment with optional prior art disclosure
- ✓ 112 issue overview

 **Generate Report**

Analysis

This provides in-document review of:

- ⚙ Antecedent Basis
- ⚙ Claim Term Support
- ⚙ Figure Reference Consistency
- ⚙ Formalities
- ⚙ Profanity

Reviewing Application 2%



Drafting Tools: Rowan Patents aka TurboPatent

Predictive analytics

Art unit predictions

Eligibility prediction

Similarity search

Review summary

Overview

Antecedent basis

Claim support

Claim order and formatting

Parts list

Claim tree

Back

☐ Include relevant paragraphs?

9 ✓

Antecedent basis comments

✓ Comments included

2 ✓

Figure reference comments

✓ Comments included

0 ✓

Claim support comments

✓ Comments included

0 ✓

Claim order and format comments

✓ Comments included

Get the Word file with the selected reviews

Get file

Report on 1 - Draft specification 2-APR-2021.docx

Export to PDF

Predictive analytics

Art unit predictions

Eligibility prediction

Similarity search

Review summary

Overview

Antecedent basis

Claim support

Claim order and formatting

Parts list

Claim tree

Art Unit Predictions

Statistics for the five most-likely results, in decreasing order

Art Unit	Allowance rate	Pendency (months)	Avg. no. of Office actions	% granted with appeal
2139	82%	32	1.8	5%
2154	75%	43	2.4	9%
2445	74%	44	2.3	9%
2455	78%	40	2.1	8%
2459	44%	54	3.2	12%

Eligibility Prediction

Eligibility based on similarity to claims rejected under 101 for abstraction

[Hide](#) eligibility information



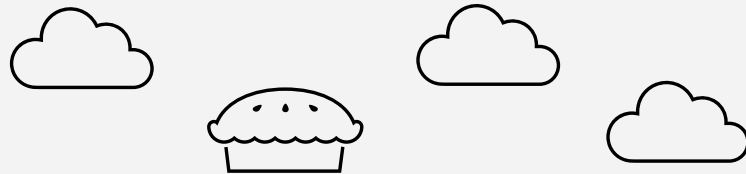
Harrity



1. Attorney drafts method claims.
2. Attorney provides boilerplate figures.
3. Harrity software drafts computer-readable medium and system claims.
4. Harrity software prepares method flow chart.
5. Harrity software drafts description of method flow chart that supports the claims.
6. Attorney drafts additional specification text and/or drawings.



Drafting Tools: Patent Bots



What is Patent Bots?

“Essential Tools for Patent Prosecution”

- Automated Proofreading
- Art Unit Predictor
- Examiner Statistics
- Prosecution Statistics

Drafting Tools: Patent Bots

Automated Proofreading

Specification

- Claim Numbering
- Antecedent basis
- Term support

Figures

- Numbering
- Reference Labels

Responses



Drafting Tools: Patent Bots

Automated Proofreading

Provide Word Document and Figures

Analyze All — Perform all of our proofreading. Submitting drawings is optional. You can submit two drawing files since PowerPoint needs separate files for portrait and landscape.

Analyze Claims — Proofread just your claims. This is faster but only useful for very long patent applications. Drawings are not needed and won't be processed if provided.

Browse

patent_application.docx

↗

Browse

drawings.pptx|vsdx|pdf (optional)

↗

Browse

drawings.pptx|vsdx|pdf (optional)

↗

Analyze All

Analyze Claims

Overview

Numbering
✓

Antec. Basis
✓

Word Support
✓

Phrase Support

Ref. Labels
21 ⓘ

Fig. Nums
✓

Profanity

AU Predictor

16	storage device [no text]	2 1	No
18	signal generation device	1	No
20	network interface device	4	No
21	one or more sensors	1	No
22	machine readable medium	2	No
24	instructions one or more instructions	3 1	No
26	communications network	2	No
28	output controller	1	No
125	document file user	5 1 1	1
145	[no text]	3	1

Drafting Tools: Patent Bots

Examiner Statistics

Background

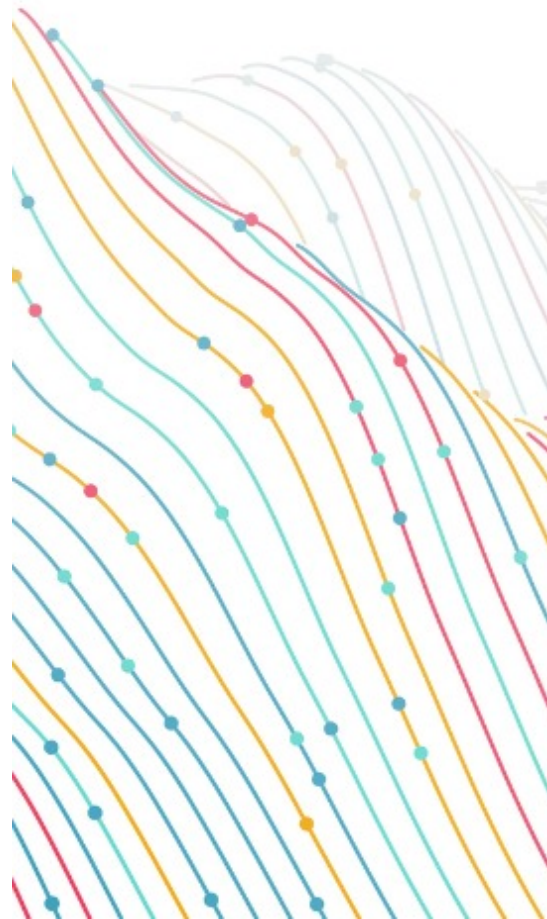
- Education
- Location
- Length of USPTO service

Grant Rate

Interview Benefit

Recent Dispositions

Appeal Statistics



Drafting Tools: Patent Bots

Examiner Statistics

Grant Rate


Interview Benefit

Recent Dispositions

Appeals Statistics

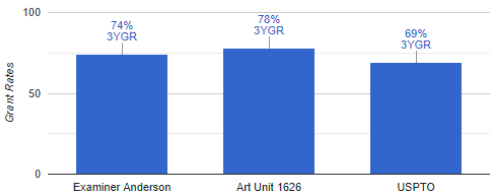
Appeal History

Grant Rate and Difficulty Ranking

3-Year Grant rate:	74% over 515 cases
Difficulty: ⓘ	Easier
Difficulty Percentile: ⓘ	39th 

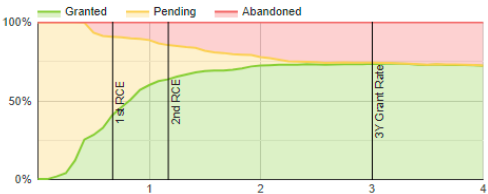
Comparison with Art Unit 1626

Examiner Anderson's grant rate is lower than that of Art Unit 1626 and higher than that of the USPTO.



Grant Rate Timeline

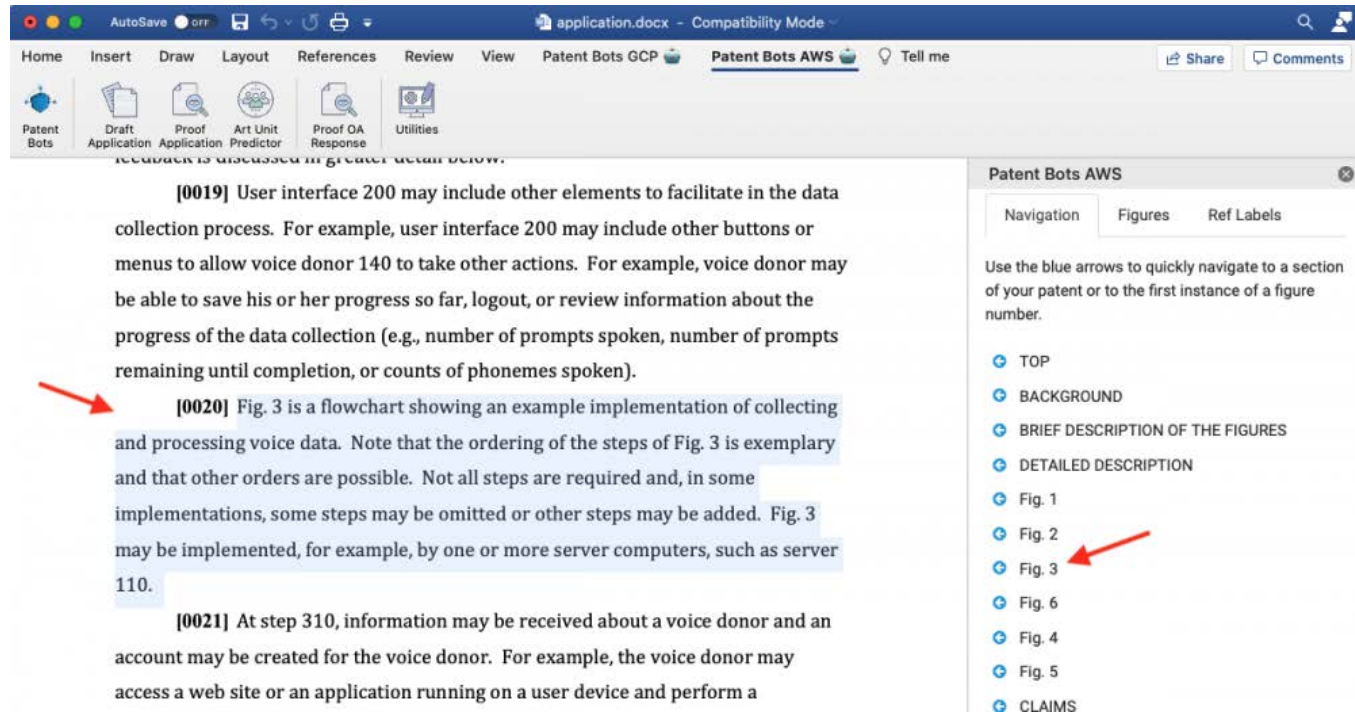
Below is the grant rate timeline for Examiner Anderson. The timeline is relative to the date of the first office action. The year grant rate is the percentage of applications granted at three years after the first office action.



Drafting Tools: Patent Bots

Word Add-in

- Convenience
- Direct Editing
- Navigation
- Drafting Assistance



Drafting Tools: Patent Bots

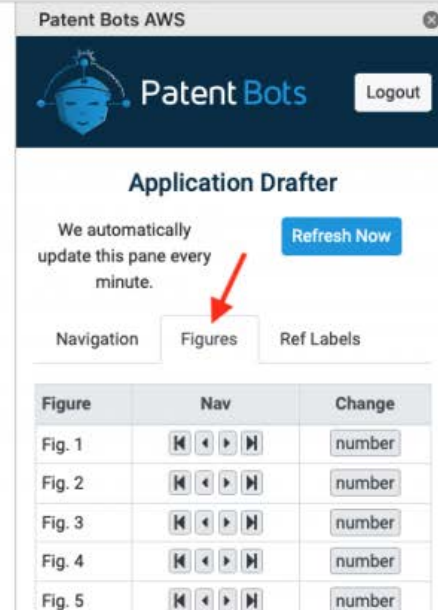
Word Add-in

- Convenience
- Direct Editing
- Navigation
- Drafting Assistance



presentation, phonemes will be used as an example speech unit. Implementations are not limited to phonemes, however, and any type of speech unit may be used instead. For an example with phonemes, the English language has approximately 45 phonemes, and it may be preferable to have at least 10-100 examples (depending on the speech unit, phoneme, or phoneme neighborhood) of a voice donor saying each phoneme so that a high quality TTS voice may be created corresponding to that voice donor. As used herein, a phoneme neighborhood may refer to an instance of a phoneme with respect to neighboring phonemes (e.g., one or more phonemes before or after the phoneme). For example, the word "cat" contains three phonemes, and the phoneme neighborhood for the "a" could be the phoneme "a" preceded by the phoneme "k" and followed by the phoneme "t".

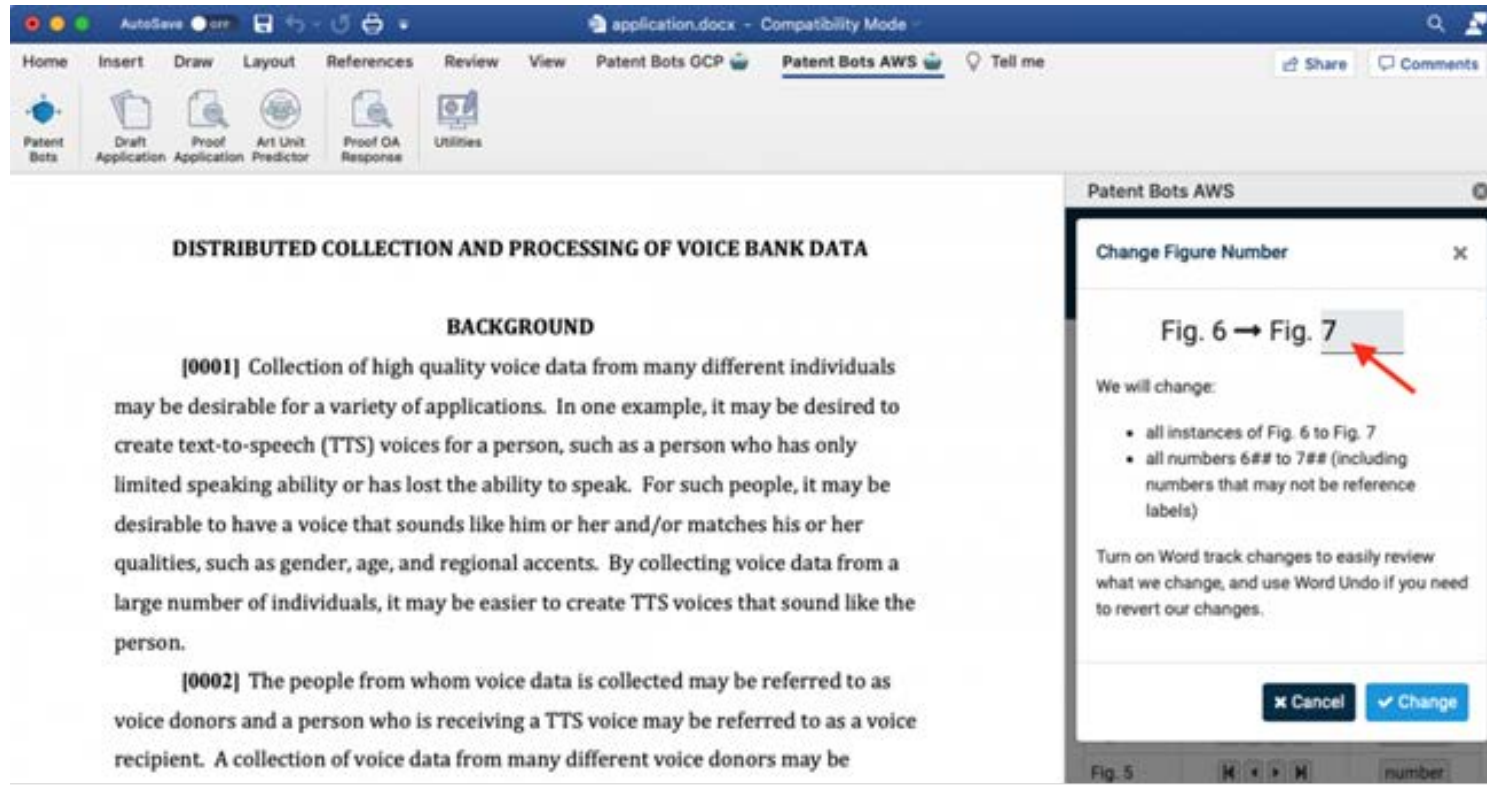
[0015] Fig. 2 shows an example of a user interface 200 that may be presented to a voice donor 140 during the process of collecting speech from the voice donor. User interface 200 is exemplary and any suitable user interface may be used for data collection. User interface 200 may be presented on the screen of a device, such as a computer, smartphone, or tablet of voice donor 140. Before beginning to use user



Drafting Tools: Patent Bots

Word Add-in

- Convenience
- Direct Editing
- Navigation
- Drafting Assistance





Drafting Tools: Clorganize



What is Clorganize?

- Claim Tagging
- Claim Manipulation

Clorganize — Claim Management

Problem

- IDF subject matter limited by claim counts
- Differing claim counts and types between jurisdictions
- Great repetition between claim classes and direct application support

How to get there

- Claim Tagging and management enables computational manipulation of claims
- Clorganize supports flexible numbering, subset selection, and claim transformation

Benefits

- Attorneys draft claims once and transform into filing forms
- Attorneys can draft claims without concern for ultimate filing count
- Complete IDF subject matter can be organized through claims

Tactical Steps

- Claim Parsing
- Claim marking (e.g., tagging, classification)
- Claim transformation

Clorganize — Workflow



Attorneys draft claims of one type (e.g., method)

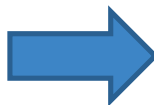
- Claims are marked up by type (e.g., "m" for method)
- Claims duplicated and tweaked for other types
- Claims are categorized (e.g., US, CN, FIRST_FILING)
- Final claim output based on type and category
- All claims transformed for inclusion into application text

Results

- Reduced drafting and revision time
- Reduced time to tailor claims to different jurisdictions
- Record of unclaimed subject matter to speed prosecution

Example

1. A method for doing really cool stuff, the method comprising:
obtaining, via a sensor, human activity in an area;
classifying, via processing circuitry, portions of the activity into a set of classes;
measuring human attention devoted to classes of activity, applying the measure to the set of classes;
selecting a subset of classes from the set of classes based on the measure; and
performing an activity from the subset of classes.
2. The method of claim 1, wherein the sensor is a camera.
3. The method of claim 2, wherein measuring the human attention devoted to the classes of activity includes:
applying gaze detection to images captured by the camera to count a number of observers for a class of activity; and
using the number of observers as a portion of a measurement of the human attention.
4. The method of claim 2, wherein measuring the human attention devoted to the classes of activity includes:
applying sentiment detection to images captured by the camera to count a number of observers for a class of activity to produce a sentiment of human observers; and
using sentiment of human observers as a portion of a measurement of the human attention.
5. The method of claim 4, wherein the sentiment detection provides a sentiment that is one of disgust, fear, boredom, or pleasure.



[ep cn us] m10. The method of claim m9, wherein the artificial neural network is a spiking neural network.

[ep cn] m11. A system comprising means to perform any method of claims m1–m10.

[ep cn] m12. A machine-readable medium including instructions that, when executed, cause a machine to perform any method of claims m1–m10.

[us] crm1. A non-transitory machine-readable media including instructions for doing really cool stuff, the instructions, when executed by a machine, cause the machine to perform operations comprising:

obtaining, via a sensor, animal activity in an area;
classifying, via processing circuitry, portions of the activity into a set of classes;
taking a measurement of animal attention devoted to classes of activity;
applying the measurement to the set of classes;
selecting a subset of classes from the set of classes based on the measurement; and
performing an activity from the subset of classes.

[us] crm2. The non-transitory machine-readable media of claim crm1, wherein the sensor is a camera.

[us] crm3. The non-transitory machine-readable media of claim crm2, wherein taking the measurement of the animal attention devoted to the classes of activity includes:
applying gaze detection to images captured by the camera to count a number of observers for a class of activity; and
using the number of observers as a portion of a measurement of the animal attention.

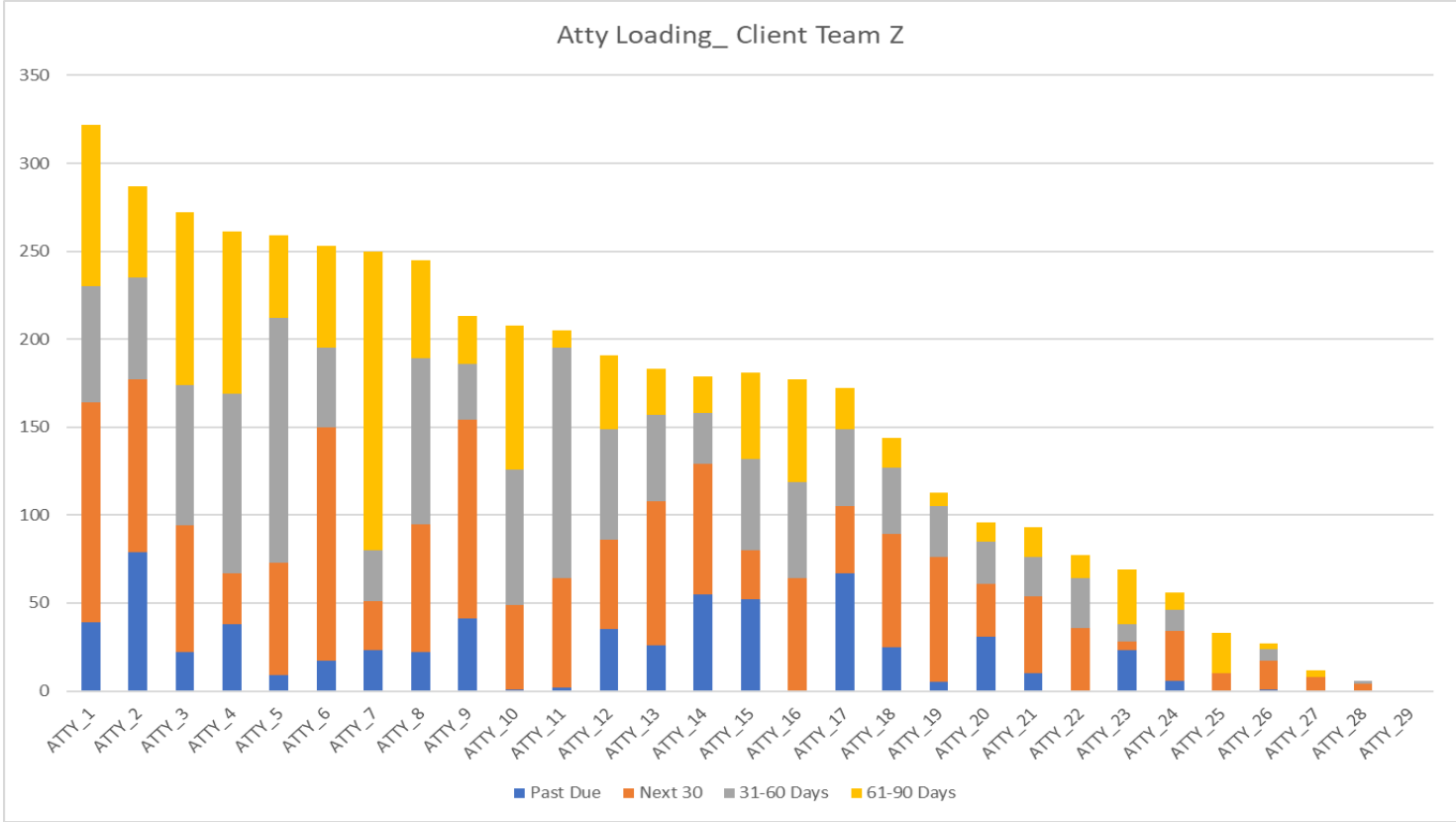
[us] crm4. The non-transitory machine-readable media of claim crm2, wherein taking the measurement of the animal attention devoted to the classes of activity includes:

Production Management Tools



- Load/Capacity Monitoring
- On-Time Delivery Monitoring
- Views
 - Firmwide
 - Client Team
 - Individual Attorney

Attorney Loading Dashboard – Firmwide View



Attorney Loading Dashboard – Firmwide View

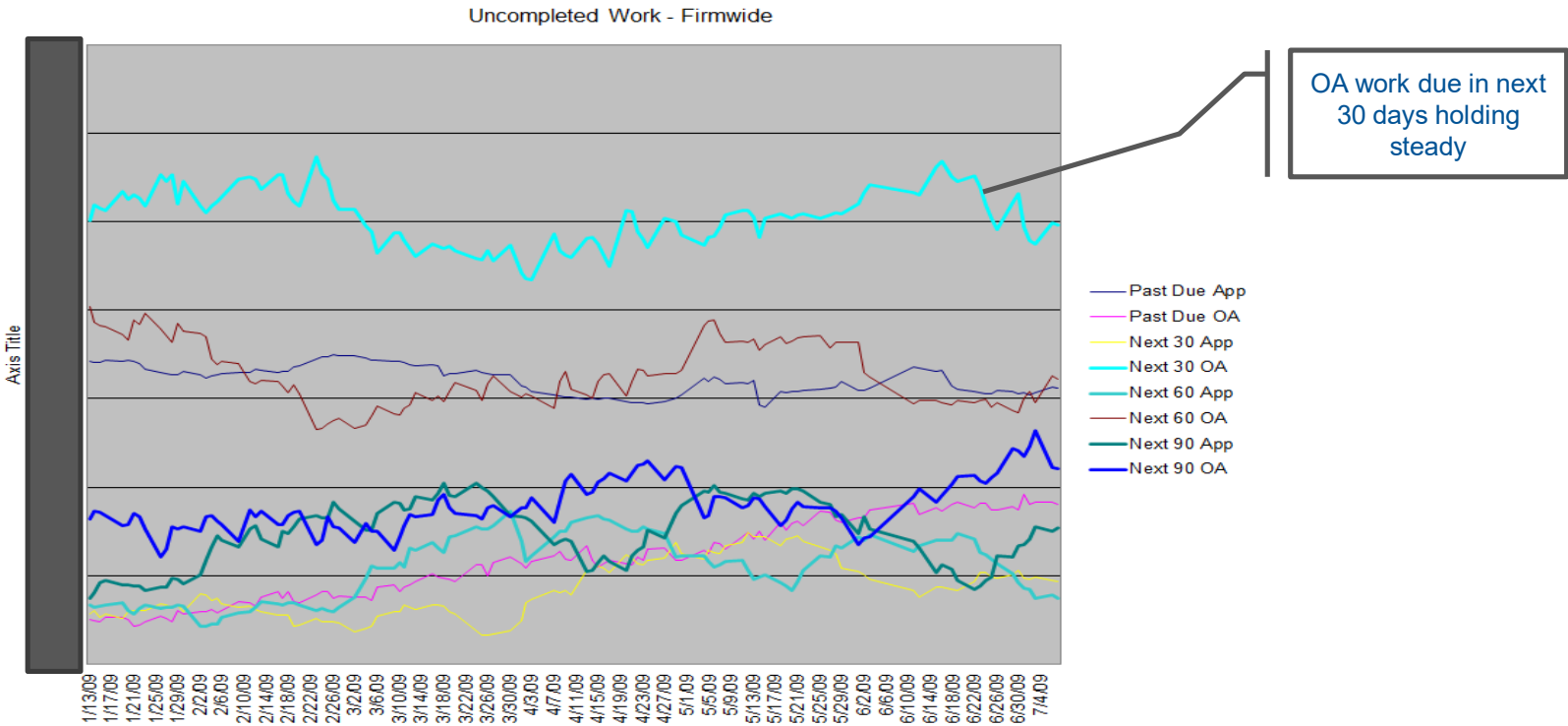
Name	Past Due	Next 30	31-60 Days	61-90 Days	Total
Attorney 1	44	25	23	11	103
Attorney 2	1	15	42	57	115
Attorney 3	0	65	54	0	119
Attorney 4	8	65	28	22	123
Attorney 5	0	16	50	69	135
Attorney 6	0	36	79	23	138
Attorney 7	22	34	50	37	143
Attorney 8	0	57	35	53	145
Attorney 9	0	53	70	23	146
Attorney 10	6	109	36	6	157
Attorney 11	9	40	72	47	168
Attorney 12	33	31	108	12	184
Attorney 13	5	74	96	14	189
Attorney 14	32	44	81	38	195
Attorney 15	0	10	4	183	197
Attorney 16	100	69	19	7	195
Attorney 17	1	68	92	42	203
Attorney 18	67	56	35	45	203
Attorney 19	1	46	80	104	231
Attorney 20	2	30	132	84	248
Attorney 21	73	52	100	39	264
Attorney 22	39	29	141	54	263
Attorney 23	75	88	103	10	276
Attorney 24	96	60	45	81	282
Attorney 25	0	60	118	109	287
Attorney 26	0	0	186	118	304
Attorney 27	75	39	127	66	307
Attorney 28	96	134	61	22	313
Attorney 29	33	92	157	62	344
Attorney 30	87	92	93	112	384
Attorney 31	90	197	52	56	395
Attorney 32	23	155	85	165	428

Attorney running low
on work but has
past due work

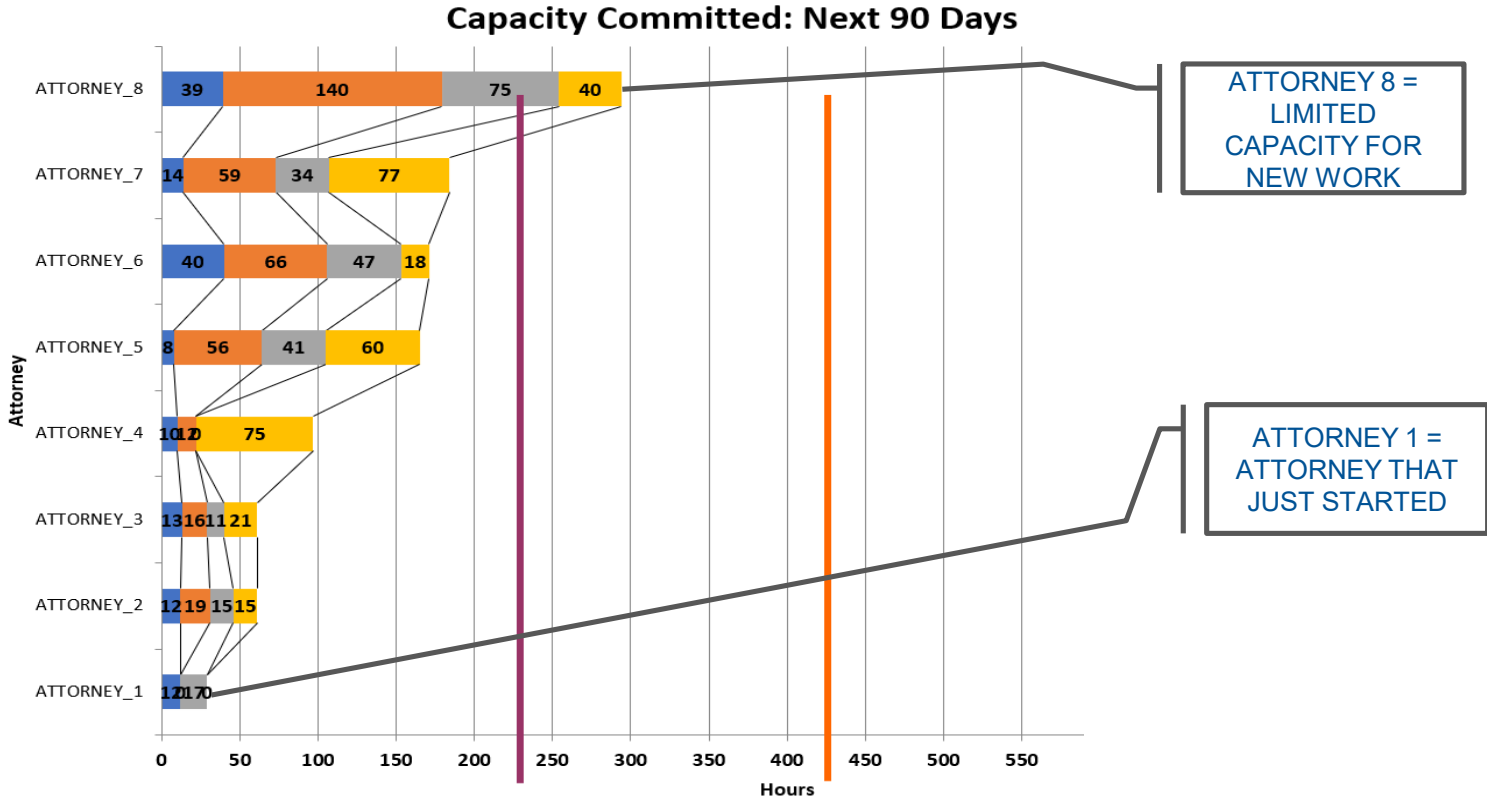
Speak to attorney
about past due work

Attorney may be
overloaded

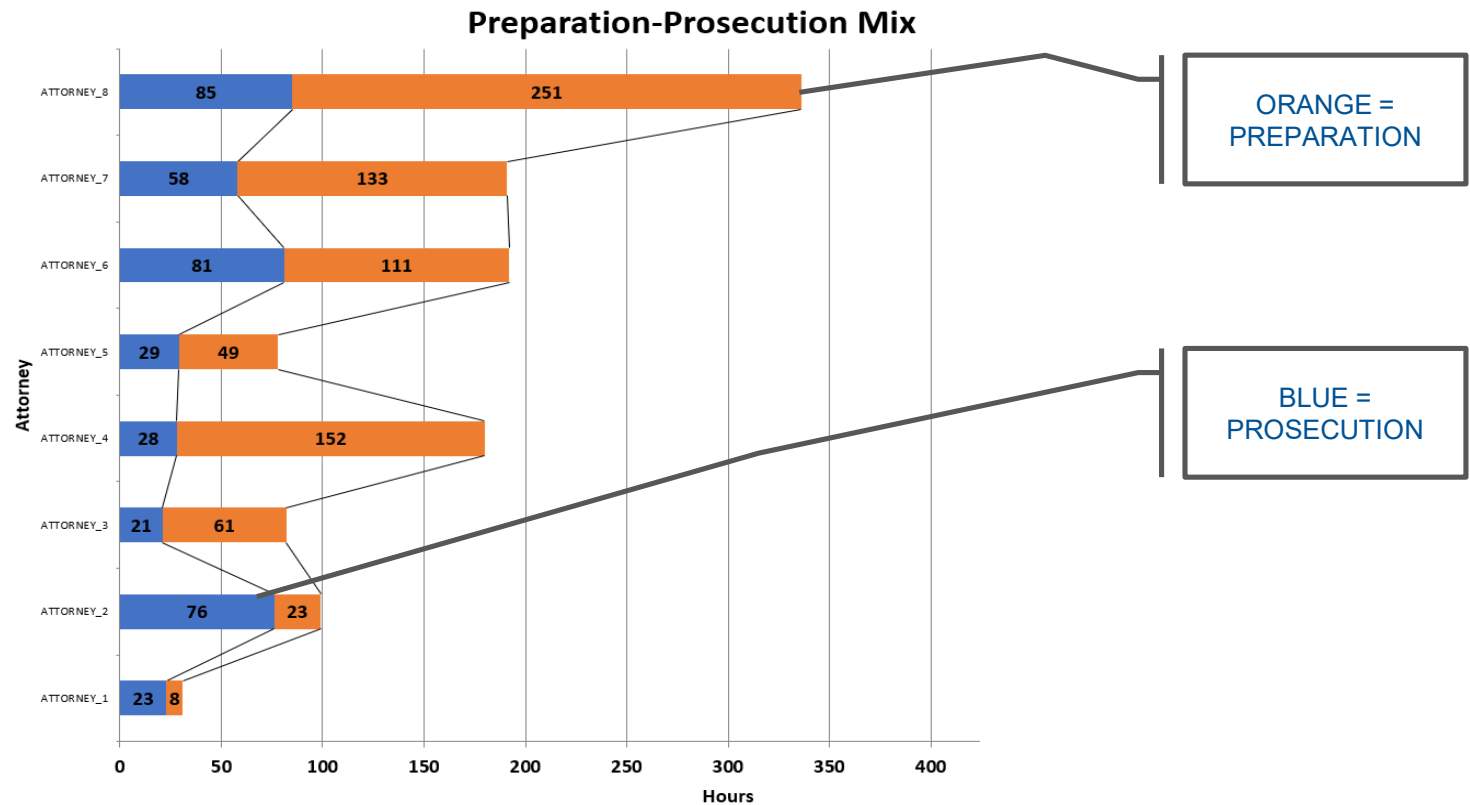
Attorney Loading Dashboard – Firmwide View



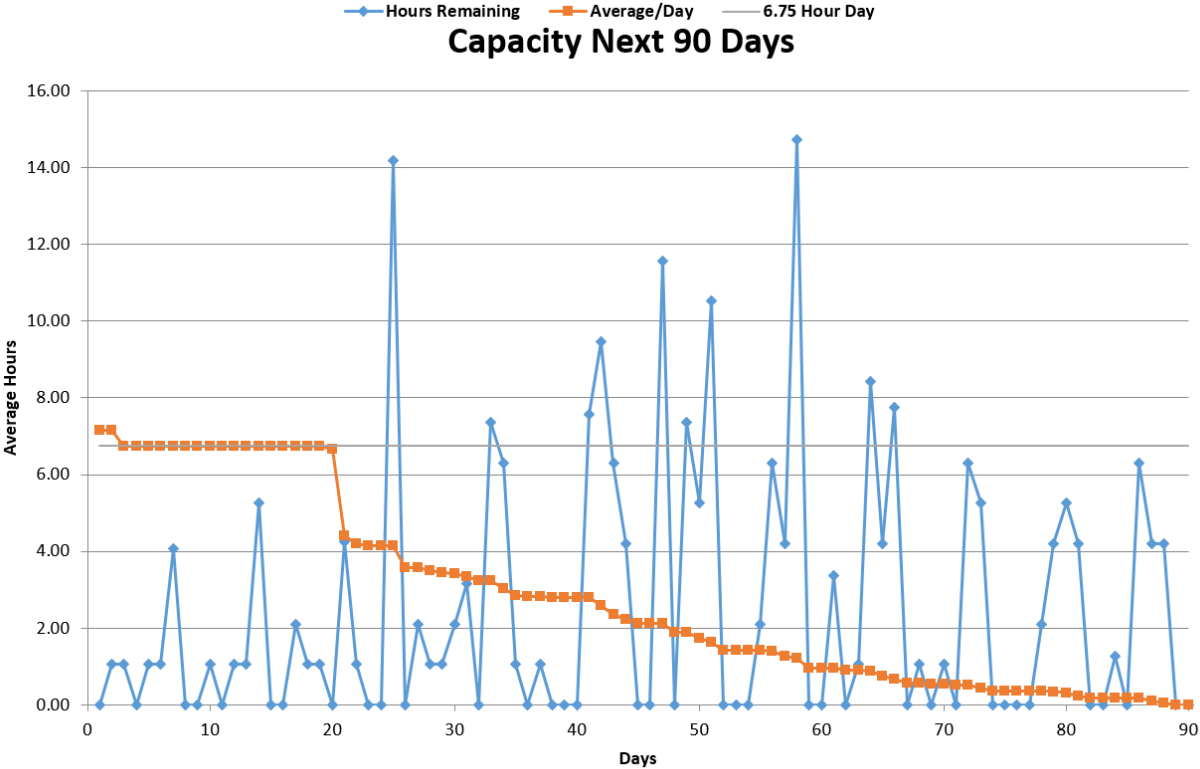
Attorney Loading Dashboard – Client Team View



Attorney Loading Dashboard – Client Team View



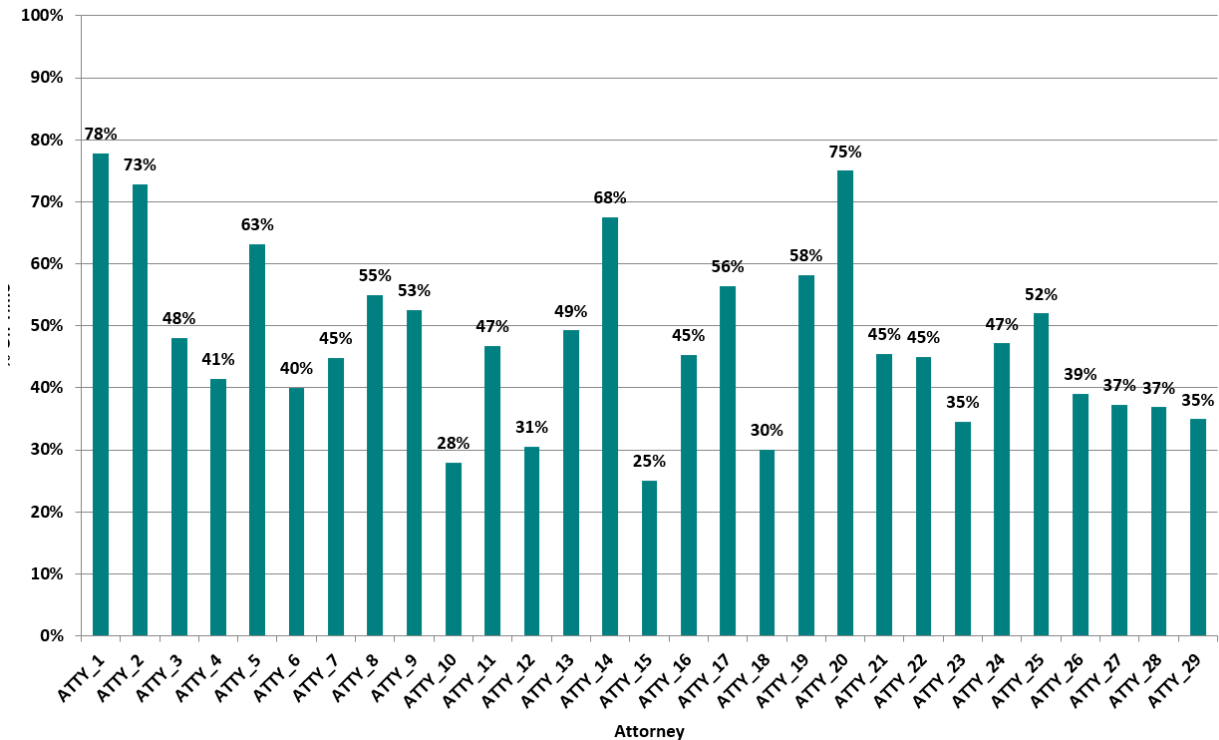
Attorney Loading Dashboard – Individual View



Attorney Performance Dashboard – Team View



Percent On Time

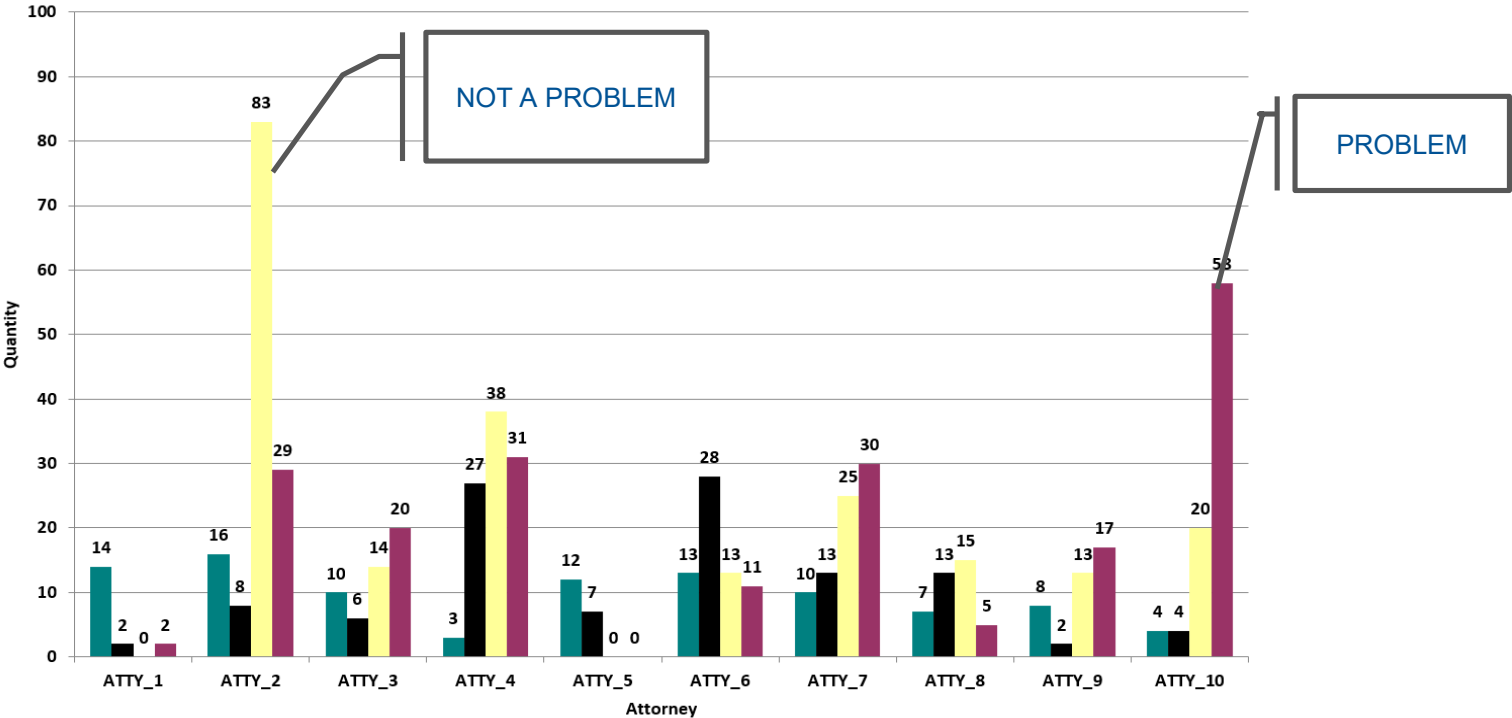


Attorney Performance Dashboard – Team View



On Time Apps Late Apps On Time OA Late OA

Group Performance





Thank you for your interest.

Questions?



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