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 SLW Institute on 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 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 Draftr (Harrity)
Patent Bots
Clorganize
Claim Master
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**
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:

1. Move Fig. 2 to become Fig. 4 (e.g., References 2xx become 4xx)
2. Fig. 3 becomes Fig. 2
3. Fig. 4 becomes Fig. 3
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**

### 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

Art Unit Predictions
Statistics for the five most likely results, in decreasing order

<table>
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<tr>
<th>Art Unit</th>
<th>Allowance rate</th>
<th>Pendency (months)</th>
<th>Avg. no. of Office actions</th>
<th>% granted with appeal</th>
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<td>54</td>
<td>3.2</td>
<td>12%</td>
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</table>
1. Attorney drafts method claims.

2. Attorney provides boilerplate figures.

3. Harrity software drafts computer-readable medium and system claims.


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?


- 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.
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 and Difficulty Ranking

<table>
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<tr>
<th>3-Year Grant rate:</th>
<th>74% over 515 cases</th>
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<tr>
<td>Difficulty:</td>
<td>Easier</td>
</tr>
<tr>
<td>Difficulty Percentile:</td>
<td>39th</td>
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</table>

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 in the year N years after the first office action.
Drafting Tools: Patent Bots

Word Add-in

- Convenience
- Direct Editing
- Navigation
- Drafting Assistance

[0019] User interface 200 may include other elements to facilitate in the data collection process. For example, user interface 200 may include other buttons or menus to allow voice donor 140 to take other actions. For example, voice donor may be able to save his or her progress so far, logout, or review information about the progress of the data collection (e.g., number of prompts spoken, number of prompts remaining until completion, or counts of phonemes spoken).

[0020] Fig. 3 is a flowchart showing an example implementation of collecting and processing voice data. Note that the ordering of the steps of Fig. 3 is exemplary and that other orders are possible. Not all steps are required and, in some implementations, some steps may be omitted or other steps may be added. Fig. 3 may be implemented, for example, by one or more server computers, such as server 110.

[0021] At step 310, information may be received about a voice donor and an account may be created for the voice donor. For example, the voice donor may access a website or an application running on a user device and perform a
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

DISTRIBUTED COLLECTION AND PROCESSING OF VOICE BANK DATA

BACKGROUND

[0001] Collection of high quality voice data from many different individuals may be desirable for a variety of applications. In one example, it may be desired to create text-to-speech (TTS) voices for a person, such as a person who has only limited speaking ability or has lost the ability to speak. For such people, it may be desirable to have a voice that sounds like him or her and/or matches his or her qualities, such as gender, age, and regional accents. By collecting voice data from a large number of individuals, it may be easier to create TTS voices that sound like the person.

[0002] The people from whom voice data is collected may be referred to as voice donors and a person who is receiving a TTS voice may be referred to as a voice recipient. A collection of voice data from many different voice donors may be...
Drafting Tools: Clorganize

What is Clorganize?

- Claim Tagging
- Claim Manipulation
## Clorganize — Claim Management

<table>
<thead>
<tr>
<th>Problem</th>
<th>How to get there</th>
<th>Benefits</th>
<th>Tactical Steps</th>
</tr>
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</table>
| • IDF subject matter limited by claim counts  
• Differing claim counts and types between jurisdictions  
• Great repetition between claim classes and direct application support | • Claim Tagging and management enables computational manipulation of claims  
• Clorganize supports flexible numbering, subset selection, and claim transformation | • 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 | • 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

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- **Attorney running low on work but has past due work**
- **Speak to attorney about past due work**
- **Attorney may be overloaded**
OA work due in next 30 days holding steady
Attorney Loading Dashboard – Client Team View

Capacity Committed: Next 90 Days

ATTORNEY 8 = LIMITED CAPACITY FOR NEW WORK

ATTORNEY 1 = ATTORNEY THAT JUST STARTED
Attorney Loading Dashboard – Client Team View

Preparation-Prosecution Mix

Attorney: ATTORNEY_8
- Preparation: 85
- Prosecution: 251

Attorney: ATTORNEY_7
- Preparation: 58
- Prosecution: 133

Attorney: ATTORNEY_6
- Preparation: 81
- Prosecution: 111

Attorney: ATTORNEY_5
- Preparation: 29
- Prosecution: 49

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- Prosecution: 152

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- Preparation: 76
- Prosecution: 23

Attorney: ATTORNEY_1
- Preparation: 23
- Prosecution: 8

Orange = Preparation
Blue = Prosecution
Attorney Loading Dashboard – Individual View

Capacity Next 90 Days

- Hours Remaining
- Average/Day
- 6.75 Hour Day

Days

Average Hours
Attorney Performance Dashboard – Team View

Group Performance

PROBLEM

NOT A PROBLEM
Thank you for your interest.

Questions?
These materials are for general informational purposes only. They are not intended to be legal advice, and should not be taken as legal advice. They do not establish an attorney-client relationship.