PatentCAD: Computer Aided Drafting of Patent Applications

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PatentCAD: Computer Aided Drafting of Patent Applicatons

(1) Natural Language Processing

(2) Claims

(3) PatentCAD: Using NLP to create patent applications

NLP is:

(1) Not a client-side application

(2) Not plug and play

(3) Not the understanding of the words themselves

NLP is an engine

Analysis and the relations of the words

NLP can be custom tuned

Identification of named entities

Best suited for deployment on a server
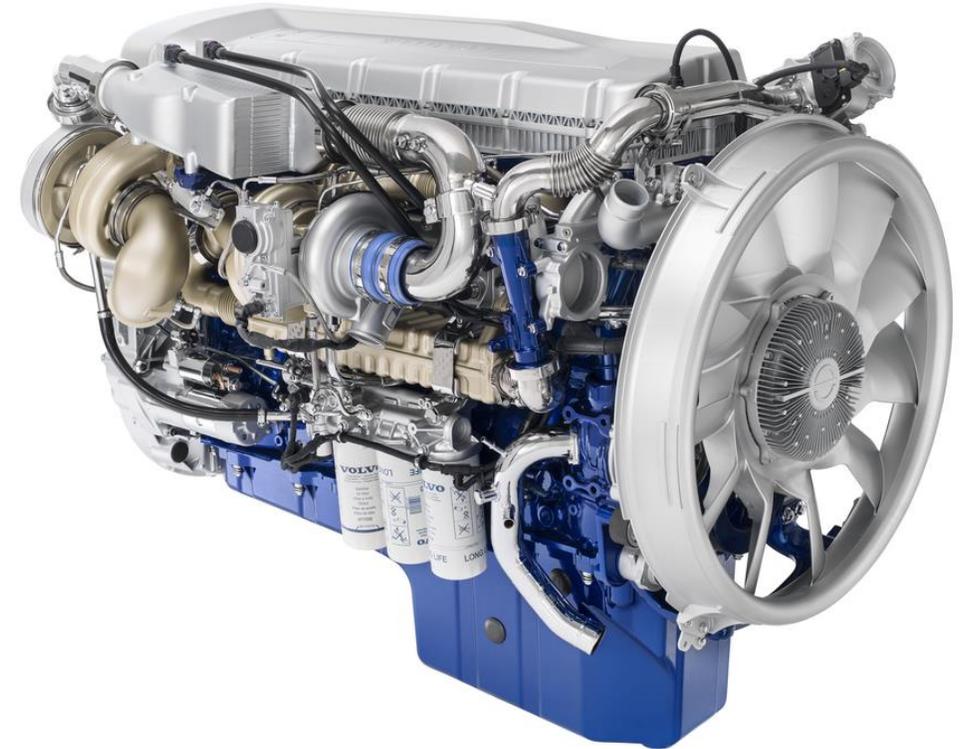
NLP Tokenization

Tokens are the NLP output and identify relationships between the words.
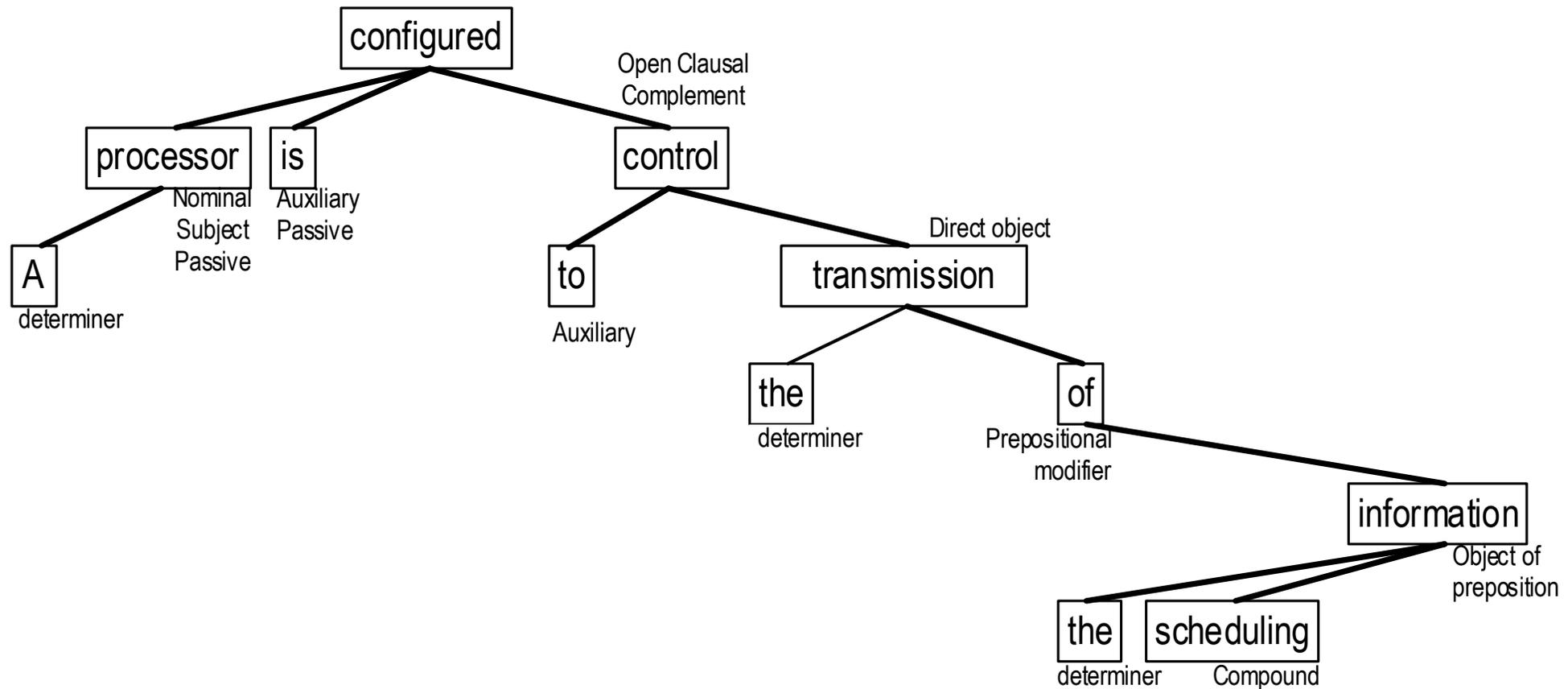
Further Applications of NLP

(1) Sentiment analysis

(2) Chatbots

(3) Text classification

(4) Text summarization

What is a Patent?

- A U.S. patent is a property right that allows the patent owner *to exclude others* from making, using, and selling an invention or importing an invention into the U.S. for a limited period of time

- A patent is *not a right to practice* the technology

- Patents are enshrined in the U.S. Constitution

- Article I, Section 8, states "Congress shall have power . . . to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and <u>discoveries</u>"

Utility Patents (U.S. and Foreign)

- **Utility patents** may be granted to anyone who invents or discovers any new and useful process, machine, article of manufacture, or composition of matter, or any new and useful improvement thereof
  - How a touch-screen works
  - The touch-screen material and how its manufactured
  - The global positioning system that allows your phone to detect where it is located
  - The chips in your phone that run it, allow it to send and receive data, interact through the touch-screen
  - The software that runs the phone

Features of a Utility Patent

- A written description of the invention that enables one of ordinary skill in the art to make and use the invention

- Figures that coincide with the written description

- Claims – the heart of the patent define the inventive property right that the Examiner compares against the prior art to determine if you are entitled to a patent

- For inventive processes, the written description and an accompanying flowchart should describe each step of the process, describe what device or devices perform the step, and describe the interrelationships between steps

Peloton Patent 9,174,085
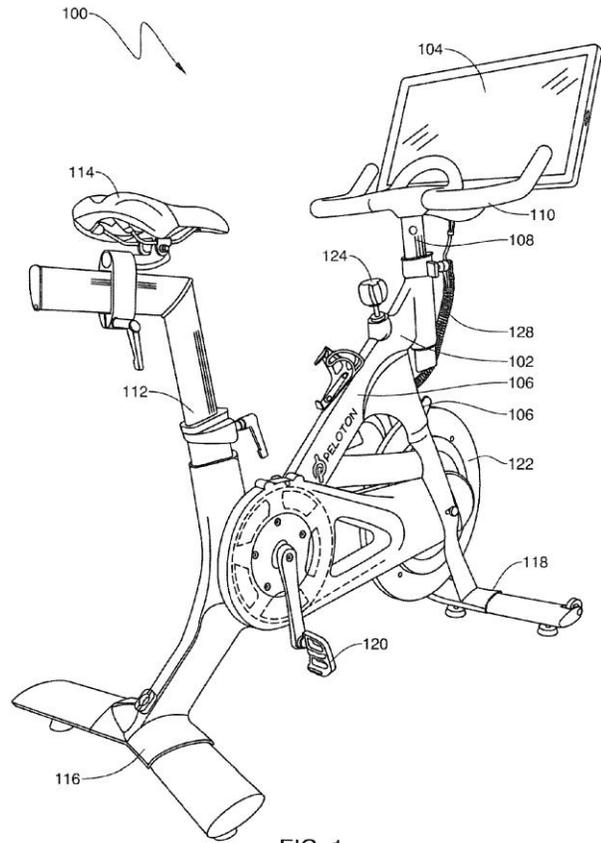
FIG. 1
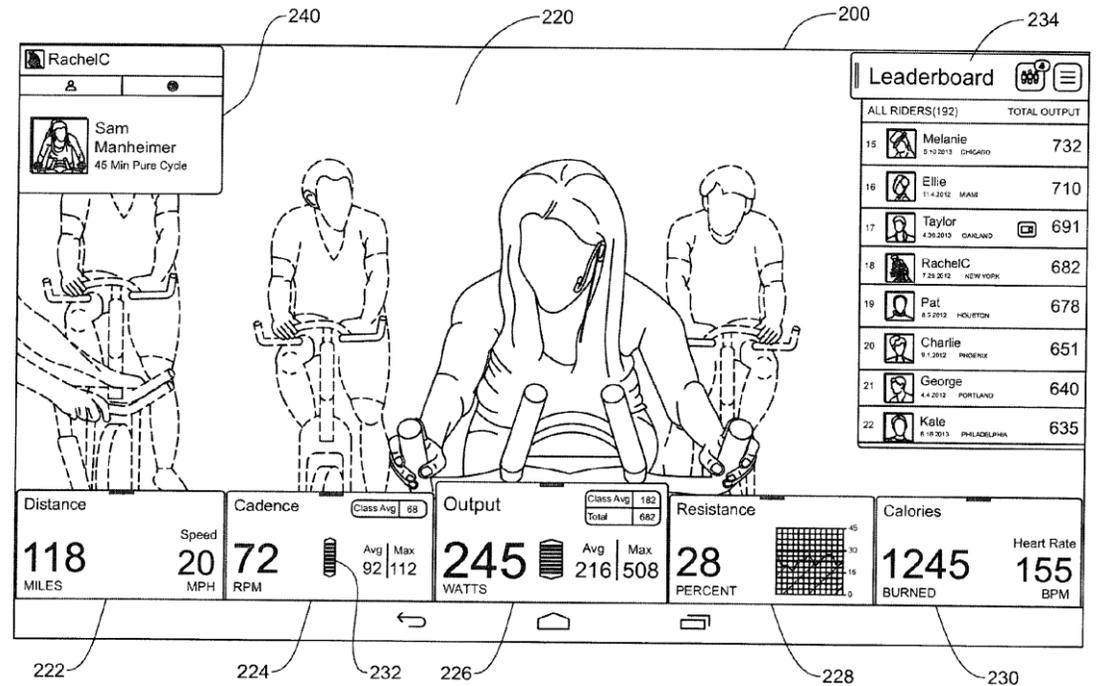
FIG. 8

Example Claim

1. A method for providing live and archived cycling classes to remote users comprising:

providing information about available live and archived cycling classes that can be accessed via a digital communication network by a first user at a first remote location for display at the first remote location;

providing an interface that includes a display screen associated with a first stationary bike whereby the first user can select either a live cycling class or select among a plurality of archived cycling classes to be displayed on the display screen via the interface;

receiving from the first user a selection of one of the available live or archived cycling classes for display on the display screen associated with the first stationary bike at the first remote location;

sending digital video and audio content comprising the selected cycling class from a server to a computer associated with the first stationary bike at the first remote location for display to the first user on the display screen associated with the first stationary bike;

detecting a plurality of performance parameters from the first stationary bike at the first remote location at a particular point in the selected cycling class;

displaying at least one of the plurality of current performance parameters detected from the first stationary bike at the first remote location on the display screen associated with the first stationary bike;

detecting a plurality of performance parameters from a second user on a second stationary bike at a second remote location at the same point in the selected cycling class;

displaying at least one of the plurality of performance parameters detected from the second stationary bike on the display screen associated with the first stationary bike such that at least one of the performance parameters from the first stationary bike at the particular point in the selected cycling class and at least one of the performance parameters from the second stationary bike at the same point in the selected cycling class are presented for comparison on the display screen associated with the first stationary bike.

PatentCAD

(1) Uses NLP to help draft a patent application

(2) Automate repetitive tasks

(3) Improve quality by providing more predictable work product

PatentCAD: an assembly line for patent drafting

Station 2: select boilerplate and other common content

Station 3: prepare a flowchart

Station 4: Create new claims from method claims

Station 5: Create summary and final options

Station 1: Prepare method Claims

Result:

(1) Specification

(2) Drawings

Station 1: Input Method Claims and Data

Insert static information and claims

The "base document" is various document defaults (font, font size, styles, etc.)

Station 2: Build an Outline using Templates

Use templates to create an outline of the specification

Templates are drawings & descriptions

All template content is dynamically updated

Station 3: Flowchart

Initial flowchart automatically generated from the claims

Provides graphical feedback to guide the creation of the flowchart

Flowchart controls the generated description

Flowchart: Conditional Branches

User provides input to correctly sequence the flowchart together
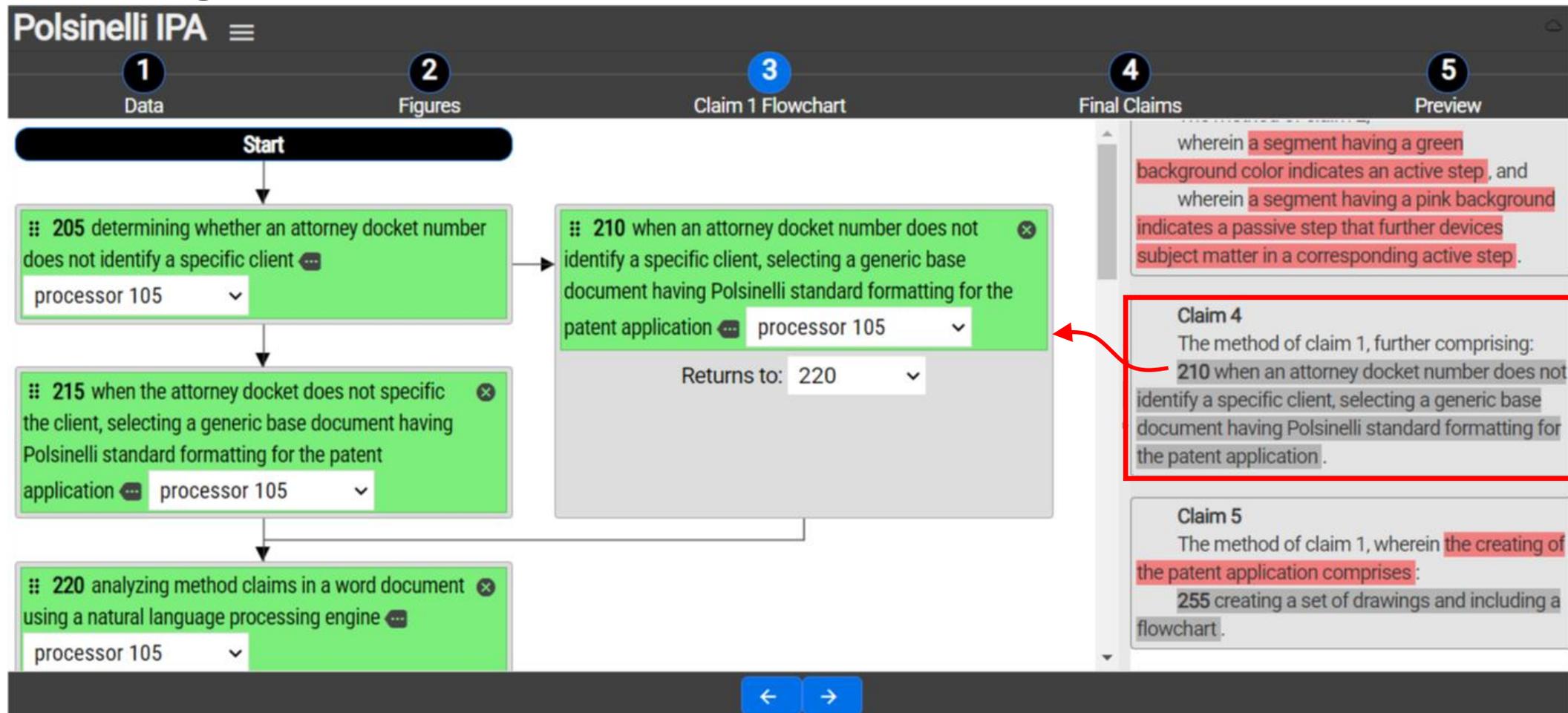
Flowchart: Tie into hardware
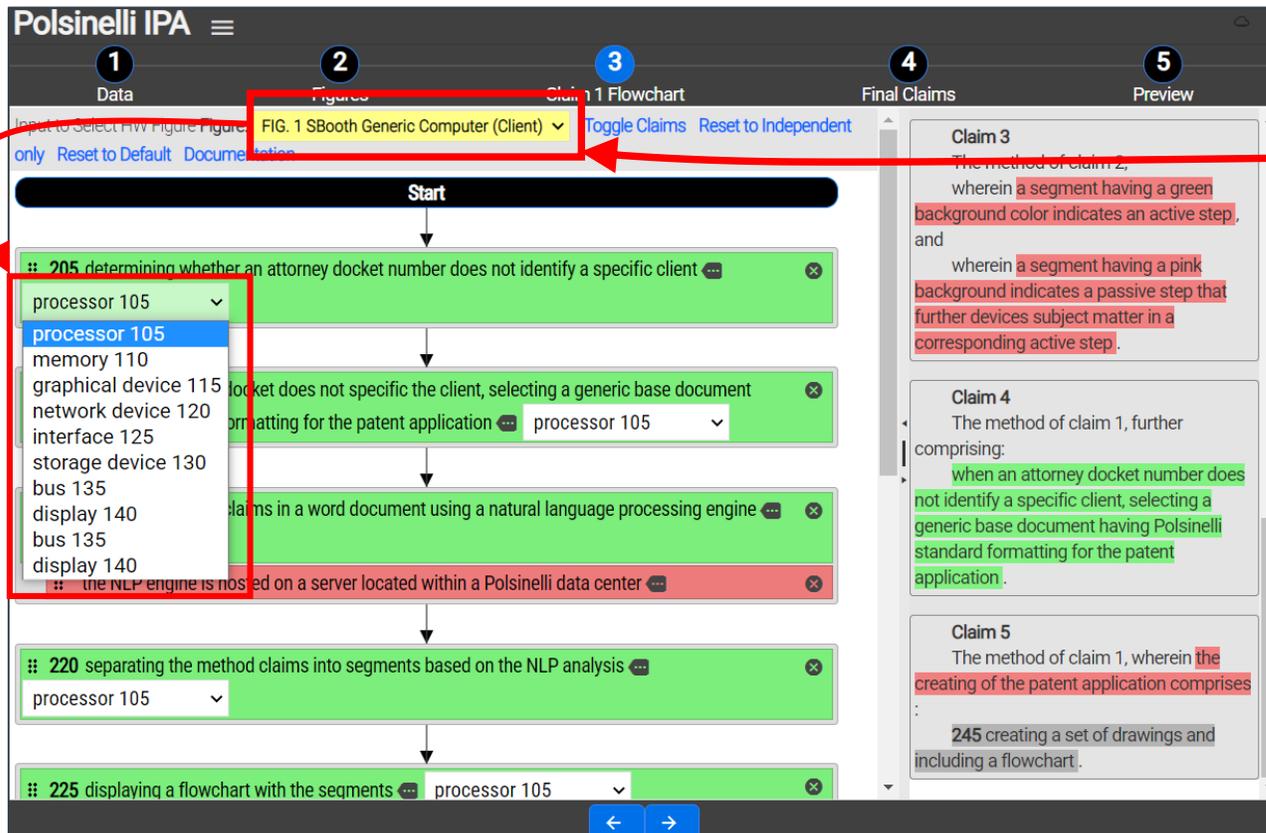
Flowcharts can be linked to associated hardware figures

[0013] According to some examples, the method includes *determining whether an attorney docket number does not identify a specific client* at block 205. For example, the processor 105 illustrated in FIG. 1 may *determine whether an attorney docket number does not identify a specific client*.

Station 3: Complex Nodes in Flowchart
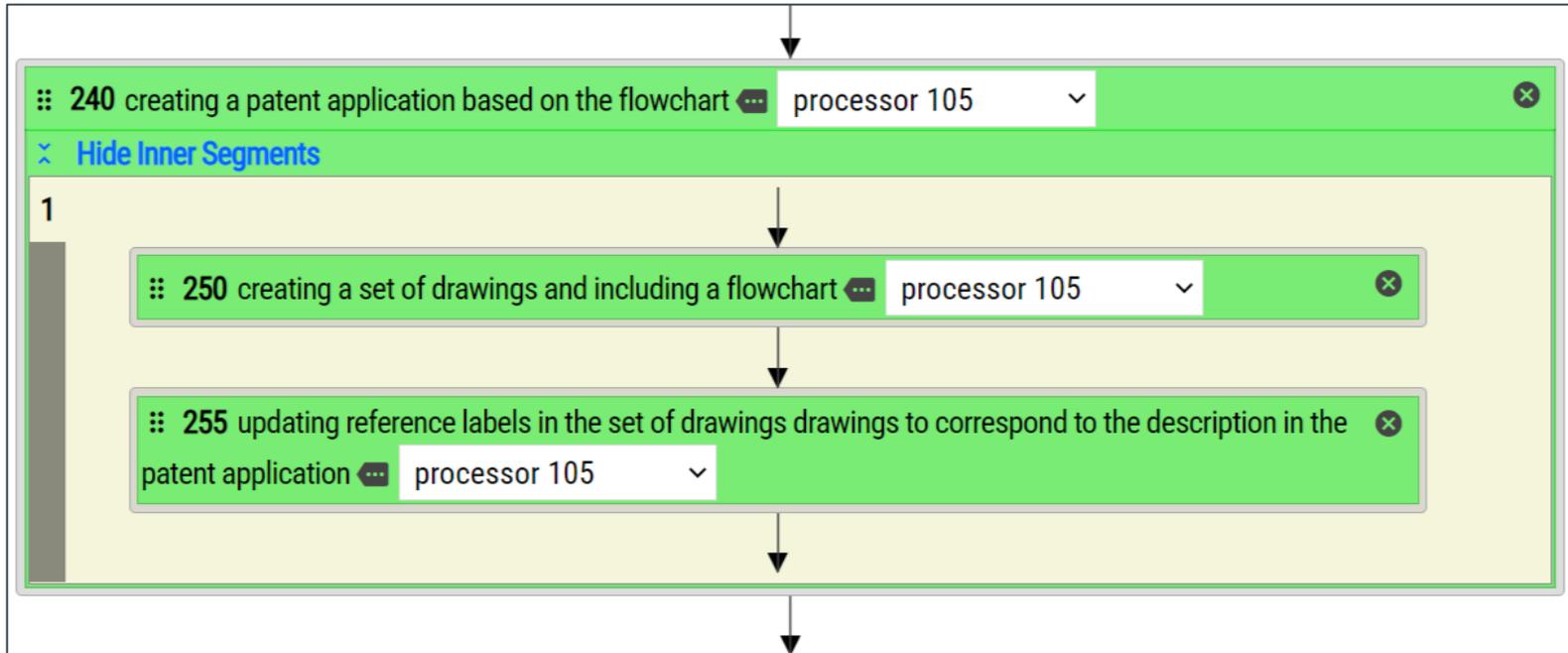
- Steps can be further defined

- Flowchart can address mutually exclusive embodiments

Station 4: Adding Claims

Two steps:

(1) Add claims for disclosure (Summary and ClaimsBank)

(2) Remove claims to reduce total # of claims

Add claims that are composed from the method claims

- Apparatus, System, CRM claims

Station 4: Removing Claims

Claim UI allows dynamic removal of claims

Encourages drafting additional claims to ensure support in the claims

Station 4: Claims Bank

ClaimsBanks

- multiple dependency section for literal support

- Based on all claims

Summary/Final Options

Create summaries based on method claims

Options to control various formalities

Resulting Specification

the memory and configured to execute instructions and, in conjunction with various components (e.g., a network interface, a display, an output device, etc.), cause the computer system to: determine whether an attorney docket number does not identify a specific client; when the attorney docket does not specific the client, select a generic base document having Polsinelli standard format for the patent application; analyze method claims in a word document using a natural language processing engine, wherein the NLP engine is hosted on a server located within a Polsinelli data center; separate the method claims into segments based on the NLP analysis; display a flowchart with the segments; display a claim panel that illustrates the method claim and each segment provides visual feedback; rearrange the segments within the flowchart use an intuitive user input; create a patent application based on the flowchart, wherein the patent application includes a description of the flowchart that corresponds to the rearranged segments.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004]   FIG. 1 illustrates an example computer system for executing a client application.

[0005]   FIG. 2 is a flowchart of a method for summary according to an example of the instant disclosure.

[0006]   FIG. 3 illustrates _____.

[0007]   FIG. 4 is a block diagram of a programming module according to various embodiments of the present disclosure.

DETAILED DESCRIPTION

[0008]   FIG. 1 illustrates an example computer system 100 for implementing a part of the instant disclosure. For example, the example computer system 100 may execute a client application for performing the instant disclosure.

[0009]   The example computer system 100 includes a processor 105, a memory 110, a graphical device 115, a network device 120, interface 125, and a storage device 130 that are connected to operate via a bus 135. The processor 105 reads causes machine instructions (e.g., reduced instruction set (RISC), complex instruction set (CISC), etc.) that are loaded into the memory 110 via a bootstrapping process and executes an operating system (OS) for executing application within frameworks provided by the OS. For example, the processor

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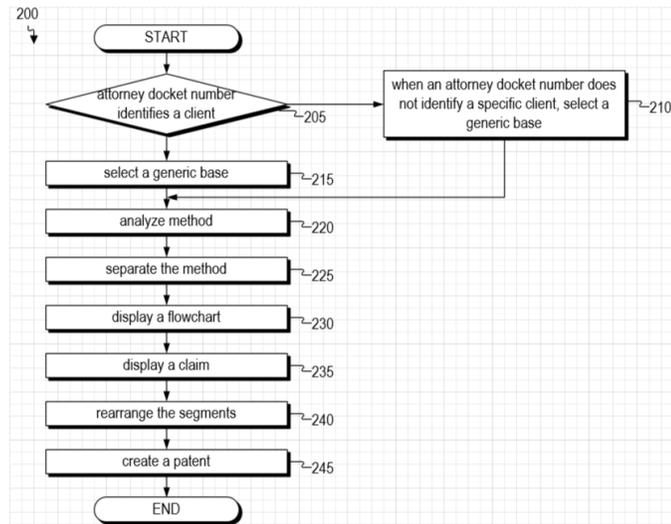
FIG. 2

Populate initial draft application with as much content as possible

All content is current and comports with latest requirements

Remaining tasks for a complete application

Background
- ~~Boilerplate~~
- Specific

Summary
- ~~Boilerplate~~
- ~~Claims in sentence form~~

Drawing Descriptions
- ~~Boilerplate~~
- ~~Common drawings~~
- Specific drawings

Drawing Descriptions
- ~~Boilerplate~~
- ~~Common descriptions~~
- Specific descriptions

Claims
- Method Claims
- ~~Apparatus Claims~~
- ~~CRM Claims~~
- ~~System claims~~

- Reduce repetitive tasks that do not enhance value
- Provide more consistency
- Add more disclosure by overdrafting claims
- Ensure EU support for all drafted claims

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PatentCAD Specifications vs Automated Solutions

Existing automated solutions generate specifications based on claim order.

PatentCAD creates based on user input

PatentCAD can address complex claims not possible with automated solutions

Claims

1. A method comprising:

Step A
Step C
Step D

2. The method of claim 1, wherein C comprises:

Step C1
Step C2

3. The method of claim 1, further comprising:

Step B

PatentCAD Spec

Step A
Step B
Step C
Step C1
Step C2
Step D

Automated Solutions

Step A
Step C
Step D
Step C1
Step C2
Step B
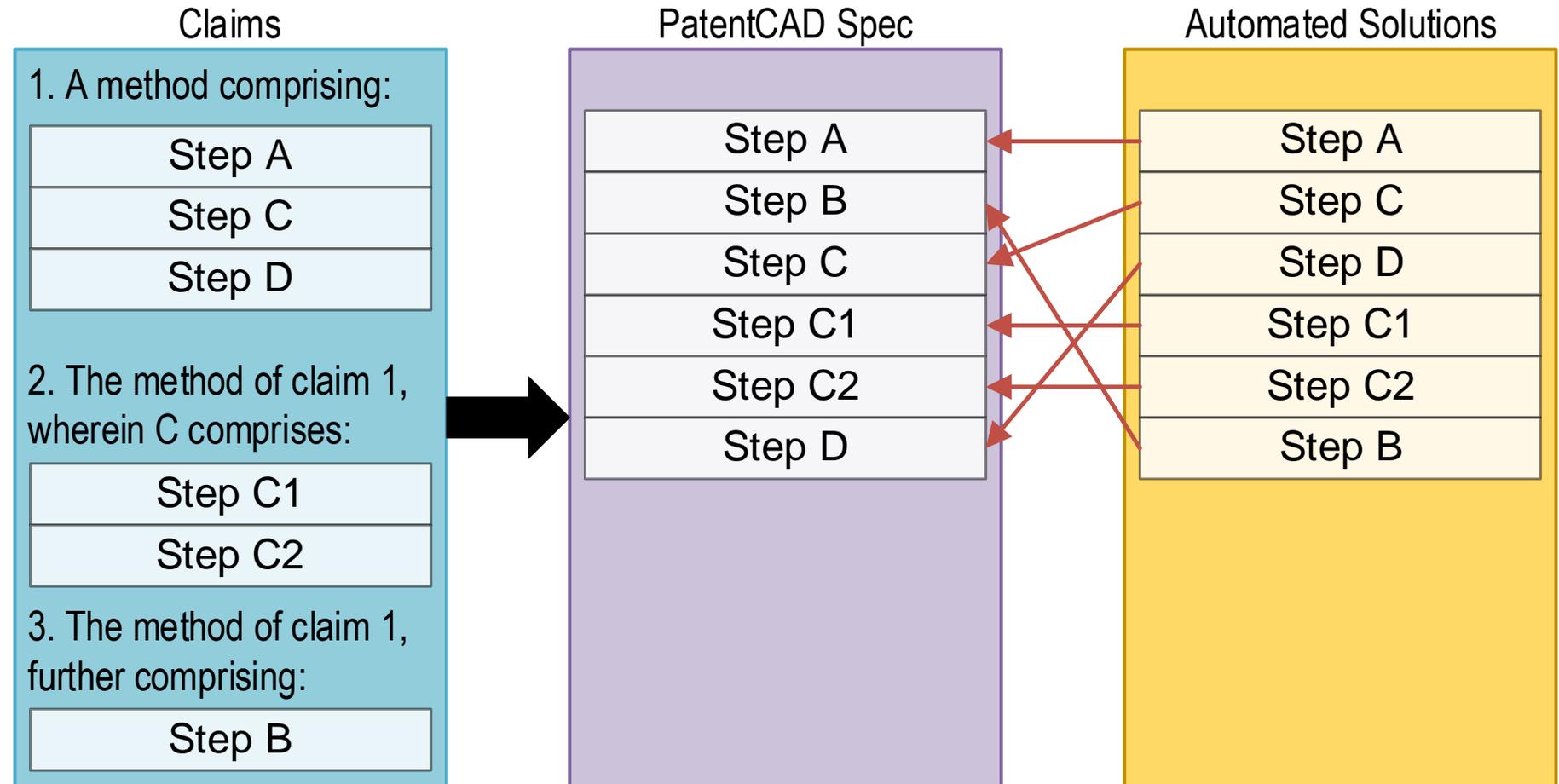
Polsinelli PatentCAD advantages

Better quality by automating tasks and formalities

Handles complex method claims

Single source of truth ensures all content is current

Client data is secured within Polsinelli Data Centers

Additional Tools

Claim analysis & antecedent basis detection
- Most flexible and accurate antecedent basis analysis because user interface allows customization

Document generation (templates for various responses)
- Simplify creation of various patent prosecution documents

Utilities to automate other tasks
- Conversion of amendment format (including reissue)
- Word-by-word based comparison

Prototyping modules for electrical, mechanical for PatentCAD