

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

RULE 14 LLC,	§	
	§	Case No.: 2:23-CV-0627-JRG-RSP
<i>Plaintiff,</i>	§	
	§	DEMAND FOR JURY TRIAL
v.	§	
	§	
UIPATH INC.,	§	
	§	
<i>Defendant.</i>	§	

**PLAINTIFF’S DISCLOSURE OF ASSERTED CLAIMS
AND INFRINGEMENT CONTENTIONS**

Pursuant to Local Patent Rule 3-1, Plaintiff Rule 14 LLC (“Plaintiff” or “Rule 14”) provides this disclosure of asserted claims and infringement contentions. Rule 14 is contemporaneously providing the document production accompanying disclosure required by P.R. 3-2 as RULE00000001-RULE00001975.

I. P.R. 3-1(a): Identification of Asserted Claims

Rule 14 identifies the following claims of each patent in suit that are infringed by UiPath. Rule 14 reserves the right to supplement its identification of asserted claims as discovery proceeds.

Asserted Patent	Asserted Claims
9,229,977	1-21
11,048,712	1-20

II. P.R. 3-1(b): Accused Instrumentalities

Rule 14 identifies the Accused Instrumentalities (also referred to as the “Accused Products”) below based solely on publicly available information. The Accused Instrumentalities are representative of all past and future releases of the same or substantially similar Accused Instrumentalities that incorporate the infringing features. For example, if a past or future release of the same Accused Instrumentality contains the same features and infringes the Asserted Claims

for the same reasons as identified by Rule 14, those past or future releases are Accused Instrumentalities. Further, unrelated variations in the Accused Instrumentalities (such as version numbers, superficial changes, minor changes, or changes in unrelated aspect, etc.) are also included as Accused Instrumentalities.

UiPath offers various **platforms**, including Automation Cloud, Automation Suite, Solutions Management, and Customer Portal. UiPath also offers various **features** in various feature categories, including Discover (Task Mining, Process Mining, Task Capture, Automation Hub, Communications Mining), Manage/Operate (Orchestrator, Test Manager / Test Suite, Insights, and Automation Ops), and Build/Automate (Studio Family,¹ Document Understanding, Marketplace,² Integration Service,³ Data Service, Robots, AI Center,⁴ Action Center,⁵ Assistant,⁵ Apps,⁵ and Chatbots⁵).

The Accused Instrumentalities (or Accused Products), for both U.S. Patent No. 9,229,977 and 11,048,712, are UiPath's various platforms when they include the relevant features discussed in these contentions and/or the UiPath features as standalone products, including when the features (in combination or standalone) are used in concert with models or code provided through UiPath Marketplace.

¹ Studio Family includes Studio, StudioX, and Studio Web.

² UiPath Marketplace is "a web library of pre-built RPA content meant to optimize and scale your automation journey."

<https://docs.uipath.com/marketplace/automation-cloud/latest/user-guide/introduction>.

These contentions explain the UiPath features that meet each element. As will be appreciated, UiPath products incorporating those features can meet those elements including using specific content from UiPath Marketplace.

³ Some UiPath documentation refers to Marketplace and Integrations as being in the Discover category.

⁴ Some UiPath documentation refers to AI Center as being in the Manage/Operate category.

⁵ Some UiPath documentation refers to these features as being part of the "Engage" category.

III. P.R. 3-1(c) and (d): Infringement Claim Charts

Rule provides the claim charts attached as **Exhibits A – B** identifying specifically where each element of each asserted claim is found within each Accused Instrumentality.

Asserted Patent	Infringement Claim Chart
9,229,977	Exhibit A
11,048,712	Exhibit B

These claim charts are exemplary and are not meant to limit the evidence Rule 14 will use to prove infringement by UiPath. For example, UiPath's Accused Products all infringe in the manners described in Exhibit A and Exhibit B, including in various configurations of the features listed therein. UiPath's Accused Products that include variations in the included features infringe in the same way. To be clear, UiPath's Accused Products infringe when they incorporate the features disclosed in Exhibit A and Exhibit B, regardless of arrangement. Rule 14 further incorporates the documents produced at RULE00001976-RULE00002142, which are public documents showing certain features of the Accused Instrumentalities. Rule 14 reserves the right to use this information to show infringement as well as to show that certain UiPath products are representative.

UiPath directly infringes claims 1-21 of U.S. Patent No. 9,229,977 and claims 1-20 of U.S. Patent No. 11,048,712 by making using, testing, selling, offering to sell, providing, offering, UiPath products as shown in **Exhibits A – B**. UiPath also indirectly infringes claims 1-21 of U.S. Patent No. 9,229,977 and claims 1-20 of U.S. Patent No. 11,048,712 by inducing third parties, such as users and/or resellers, to perform actions and contributing the features shown in **Exhibits A – B**, including by providing and selling the software to users, hosting the software for users (such as on a cloud), providing support for users, and advertising the UiPath Accused Products and otherwise encouraging their use.

Rule 14 reserves the right to supplement its infringement contentions based on information learned through discovery, including information provided by UiPath. Rule 14 reserves the right and expects to rely on documents, testimony, and other evidence obtained through discovery to prove infringement in this case. Rule 14 reserves the right to amend these contentions in response to any new claim construction proposals or orders. Rule 14 reserves the right to rely on expert testimony to show infringement. These claim charts are not intended to and do not construe the claims of the Asserted Patents and do not limit Rule 14's contentions.

Moreover, each claim element of the Asserted Patents are, at least in part, "software limitations," as contemplated by Section 3(a)(i) of Judge Gilstrap's Discovery Order for Patent Cases, which states: "If a party claiming patent infringement asserts that a claim element is a software limitation, the party need not comply with P.R. 3-1 for those claim elements until 30 days after source code for each Accused Instrumentality is produced by the opposing party. Thereafter, the party claiming patent infringement shall identify, on an element-by-element basis for each asserted claim, what source code of each Accused Instrumentality allegedly satisfies the software limitations of the asserted claim elements." Rule 14 reserves the right, and intends, to supplement its contentions within "30 days after source code for each Accused Instrumentality is produced by the opposing party," as required by that provision.

Rule 14 contends that each element of each asserted claim is literally present in each Accused Instrumentality. To the extent UiPath contends that any element of any asserted claim is not literally present in an Accused Instrumentality, Rule 14 contends that such element is present under the doctrine of equivalents because the Accused Products perform substantially the same function, in substantially the same way, to achieve substantially the same result, as set forth in Exhibit A and Exhibit B.

IV. P.R. 3-1(e): Priority Date

The priority date to which each asserted patent is entitled is shown in the chart below.

Asserted Patent	Asserted Claims	Priority Date
9,229,977	1-21	June 26, 2013 (Filing date)
11,048,712	1-20	June 26, 2013 (App. No. 13/928,313, now Pat. No. 9,229,977, via its continuation-in-part, App. No. 14/960,316, now Pat. No. 10,198,516)

V. P.R. 3-1(f): Practice by Rule 14 Products

Rule 14 identifies the following Rule 14 Instrumentalities (also referred to as the “Rule 14 Products”) that possibly incorporate or reflect (or did in the past incorporate or reflect) the particular claims identified below. The Rule 14 Instrumentalities are representative of past and future releases of the same or substantially similar Rule 14 Instrumentalities that possibly incorporate or reflect the identified claims. For example, if a past or future release of the same Rule 14 Instrumentality contains the same features and infringes the Asserted Claims for the same reasons as identified by Rule 14, those past or future releases may also be Rule 14 Instrumentalities. Further, unrelated variations in the Rule 14 Instrumentalities (such as version numbers, superficial changes, minor changes, or changes in unrelated aspect, etc.) may also be included as Rule 14 Instrumentalities.

Asserted Patent	Asserted Claims	Products
9,229,977	1-21	The following Rule 14 Platform products: Brand Intel; Global Intel products; CourtQ; Jet Legal; Jet SMW (“Sequential Model Workflow”); Athena; FWA (“Fraud, Waste, and Abuse”) (deprecated); Energy Analytics (deprecated); iCRM (“intelligent Customer Relationship Management”) (deprecated); LPS (“Loss Prevention Services”) (deprecated); Reachout; Peri; SpeakUP.
	1, 2, 4-11, 13-21	The following Rule 14 Platform products: IVM (“Incident Violation Management”).
11,048,712	1-20	The following Rule 14 Platform products: Brand Intel; Global Intel products; CourtQ; Jet Legal; Jet Sequential Model Workflow; Athena; FWA (“Fraud, Waste, and Abuse”) (deprecated);

Asserted Patent	Asserted Claims	Products
		Energy Analytics (deprecated); iCRM (“intelligent Customer Relationship Management”) (deprecated); LPS (“Loss Prevention Services”) (deprecated); Reachout; Peri; SpeakUP.
	1, 2, 4-11, 13-20	The following Rule 14 Platform products: IVM (“Incident Violation Management”).

VI. P.R. 3-2: Document Production Accompanying Disclosure

Rule 14 is contemporaneously producing documents with the Bates numbers RULE00000001-RULE00001975.

RULE00000009-RULE00000110, RULE00000187-RULE00000199, RULE00000223-RULE00000225, RULE00000345-RULE00000374, RULE00000389, RULE00000408, RULE00000411-RULE00000415, RULE00000425-RULE00000426, RULE00000444-RULE00000470, RULE00000483-RULE00000774, RULE00000782-RULE00000850, RULE00000857-RULE00001065, RULE00001114-RULE00001225, RULE00001279-RULE00001481 correspond to P.R. 3-2(a), (documents (e.g., contracts, purchase orders, invoices, advertisements, marketing materials, offer letters, beta site testing agreements, and third party or joint development agreements) sufficient to evidence each discussion with, disclosure to, or other manner of providing to a third party, or sale of or offer to sell, the claimed invention prior to the date of application for the patent in suit). Rule 14’s identification of these documents is not an admission that the documents evidence or are prior art under 35 U.S.C. §102, or that any individual document was itself provided to third parties.

RULE00000001-RULE00000493, RULE00000515-RULE00000577, RULE00000583-RULE00000601, RULE00000603-RULE00000747, RULE00000775-895, RULE00000897-RULE00001113, RULE00001121-RULE00001140, RULE00001154-RULE00001163, RULE00001167-RULE00001177, RULE00001203-RULE00001207, RULE00001226-

RULE00001294, RULE00001302-RULE00001307, RULE00001309-RULE00001311,
RULE00001314-RULE00001364, RULE00001368-RULE00001369, RULE00001372-
RULE00001381, RULE00001393-RULE00001400, RULE00001405-RULE00001481
correspond to P.R. 3-2(b) (all documents evidencing the conception, reduction to practice, design,
and development of each claimed invention, which were created on or before the date of
application for the patent in suit or the priority date identified pursuant to P. R. 3-1(e), whichever
is earlier).

RULE00001482-RULE00001975 correspond to P.R. 3-2(c) (a copy of the file history for
each patent in suit).

Dated: March 12, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certified that a true and correct copy of the above and foregoing document has been served by electronic mail on March 12, 2024 to all counsel for UiPath Inc.

/s/ Michael Matulewicz-Crowley
Michael Matulewicz-Crowley

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
<p>Claim 1Pre. A method of analyzing data, comprising:</p>	<p>Plaintiff Rule 14, LLC (“Rule 14” or “Plaintiff”) accuses all versions and implementations of UiPath’s products that include features that analyze data by performing one or more elements of the ’977 Patent, including UiPath products that host, integrate, manage, work with, or affect the functionality of other UiPath products.</p> <p>As explained in the Cover Pleading, UiPath offers various platforms, including Automation Cloud, Automation Suite, Solutions Management, and Customer Portal. UiPath also offers various features in various feature categories, including <u>Discover</u> (Task Mining, Process Mining, Task Capture, Automation Hub, Communications Mining), <u>Manage/Operate</u> (Orchestrator, Test Manager / Test Suite, Insights, and Automation Ops), and <u>Build/Automate</u> (Studio Family,¹ Document Understanding, Marketplace,² Integration Service,³ Data Service, Robots, AI Center,⁴ Action Center,⁵ Assistant,⁵ Apps,⁵ and Chatbots⁵).</p> <p>The infringing products are UiPath’s various platforms when they include the relevant features discussed below and/or the UiPath features as standalone products, including when the features (in combination or standalone) are used in concert with models or code provided through UiPath Marketplace.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining analyzes data, including emails and other communications. <i>See, e.g.</i>, https://www.uipath.com/product/communications-mining (“From sending an email to responding to a customer request, every business conversation matters. But processing these communications has always been manual, costly, and inefficient. Until now.”); <i>id.</i> (“UiPath Communications Mining turns every message into actionable data, in real time and on any communications channel.”); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining is a new capability to understand and automate business communications. It uses</p>

¹ Studio Family includes Studio, StudioX, and Studio Web.

² UiPath Marketplace is “a web library of pre-built RPA content meant to optimize and scale your automation journey.” <https://docs.uipath.com/marketplace/automation-cloud/latest/user-guide/introduction>. These contentions explain the UiPath features that meet each element. As will be appreciated, UiPath products incorporating those features can meet those elements including using specific content from UiPath Marketplace.

³ Some UiPath documentation refers to Marketplace and Integrations as being in the Discover category.

⁴ Some UiPath documentation refers to AI Center as being in the Manage/Operate category.

⁵ Some UiPath documentation refers to these features as being part of the “Engage” category.

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>state-of-the-art AI models to turn business messages—from emails to tickets—into actionable data. It does this in real time and on all major business communications channels.”); <i>id.</i> (“Communications Mining gives businesses insight into previously hidden processes and channels.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.’”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”); “Communications monitoring gives managers a custom-filtered, real-time view of all service channels— extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications— like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 15 (“Communications mining can be an important component in intelligent document processing (IDP). Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<div><h2>How does communications mining work?</h2><p>Communications mining uses a combination of best-in-class AI models to turn messages into data.</p><p>It shows you what people are saying, how frequently they are saying it, and in what context.</p><div><div><p>1</p><p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p></div><div><p>2</p><p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p></div><div><p>3</p><p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p></div><div><p>4</p><p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p></div><div><p>5</p><p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p></div><div><p>6</p><p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p></div></div><p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p><p>13</p></div>
	<p>For another example, UiPath Process Mining analyzes data, including business applications data to understand end-to-end processes. <i>See, e.g.,</i> https://www.uipath.com/product/process-mining (“Use the data from your business applications to give you a detailed understanding of complex business processes. You’ll know what to automate, how to improve your processes – and be able to prove impact, too.”); <i>id.</i> (“Process Mining - analyze data from business applications to understand end-to-end processes”); https://www.uipath.com/blog/industry-solutions/how-process-mining-helps-banks-evolve (“Process mining objectively discovers processes. The technology analyzes processes in a very detailed way, providing specific observations and insights for improvement.”); https://www.uipath.com/rpa/what-is-is</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>process-mining (“Process mining connects to source systems for a continuous view into how business processes are executed.”); https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“Process mining is a powerful technology that can help businesses gain visibility into their processes. It does this by tracing the digital footprints left behind in systems and applications. Process mining then transforms that raw data into intuitive visualizations of process flows. It makes those complex and wide-ranging processes, like procure-to-pay (P2P) and order-to-cash (O2C), tangible. With thorough and fact-based visualizations, you can spot process bottlenecks, inefficiencies, and risks, at a glance.”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”); “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); <i>id.</i> at 10 (“product ensures a single source of truth by centralizing data and dashboard management”); <i>id.</i> at 11 (UiPath Process Mining was used “to evaluate more than 200,000 items, including purchase orders and invoices”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4 (“In addition, process mining can break down silos of data about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now relate the candidate process to other tasks or processes to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.”); <i>id.</i> at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”).</p> <p>For another example, UiPath Task Mining analyzes data, including data regarding employees’ desktop activities to determine improvement opportunities. <i>See, e.g.</i>, https://www.uipath.com/product/task-mining (“Get an objective data-driven picture of as-is processes, quicker and with fewer resources involved.”); <i>id.</i> at Video (analyzing daily task of employees to scale up automations; “the first stage is all about collecting” – automatically collecting and upload data from employees’ computers and then analyzing those findings “by exporting findings into UiPath Studio or as a detailed “Process Definition” document”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”); UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 2 (task mining “can capture user actions and metadata, such as keystrokes, mouse clicks, activity screenshots, and other potential system-level activities, performed together on multiple desktops to discover tasks and provide insights into the tasks and activities involved in executing a process. The technology provides a data-based approach to process optimization and automation through different applications and use cases spanning different industries and process areas.”); <i>id.</i> at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining).</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>For example, UiPath Orchestrator analyzes data, including as the centralized hub to deploy, manage, and govern all the UiPath Robots, both attended and unattended, which function to analyze data by teaching robots new AI skills, including reading documents, recognizing dynamic interfaces and understanding conversations to make complex decisions. https://docs.uipath.com/orchestrator/standalone/2023.4/user-guide/about-robots. <i>See, e.g.,</i> https://www.uipath.com/product/orchestrator (“Orchestrator tracks and logs everything every robot does, along with everything people do with robots, so you can keep compliant and secure.”); https://www.uipath.com/product/attended-automation (“Use desktop triggers to set up robots that monitor activities behind the scenes and automatically start processes based on user actions.”); <i>id.</i> (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 2 (“people and robots work together to accomplish a complex task” or “robots will work on a task and loop in their human teammates to handle an exception or make a decision”; “people and robots work together and share a computer and its resources”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 6 (“a specific action you take triggers a robot to start a task”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Insights analyzes data, including by enabling businesses to track, measure, and manage performance of an automation program. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-insights (“UiPath Insights is an RPA analytics solution that enables your business to track, measure, and manage the performance of your entire automation program—so you can scale your automation journey to the next level.”); <i>id.</i> (“Visualize automation complexity, estimated costs, and benefits of your projects with the Automation Hub integration. Compare estimated vs actual ROI of automation ideas.”); <i>id.</i> (“Measure and report on the performance of document-processing automations with an integration with Document Understanding”); <i>id.</i> at Insights Brochure (“Situational awareness of your RPA operations is critical to being able to measure and analyze everything from Robot and process performance, to transactions and exceptions. Start with the Robots, Queues, and Processes dashboards to get deeper visibility into your RPA operations.”); <i>id.</i> (“Track and measure automation performance[:]. Start out with a library of customizable</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>pre-built dashboard templates to track your robots, queues, and processes. With self-serve analytics, you and your team can measure and forecast the performance of each robot to make informed decisions that reduce errors, maximize usage, and improve efficiency.”).</p> <p>For another example, UiPath Test Suite analyzes data, including test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test</p>

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Claim 1	UiPath Accused Products
	<p>environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p> <p>See also https://docs.uipath.com/test-suite/automation-suite/2023.10/user-guide/introduction-test-suite:</p> <p>In addition, think of UiPath Test Suite as a solution, a suite of 4 tools:</p>  <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath Action Center analyzes data, including by integrating other UiPath products. <i>See, e.g.,</i> UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>(“Action Center gives you management tools to monitor processes from start to finish, identify, and resolve resource bottlenecks.”); https://docs.uipath.com/action-center/automation-cloud/latest/user-guide/introduction (“Action Center offers business users a way to handle actionable items, and provide business inputs to Robots”).</p> <p>For another example, UiPath AI Center analyzes data, including by deploying, consuming, managing, and improving machine learning models. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, manage, and improve machine learning models.”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:03) (“AI Center has machine learning (ML) automations, including document processing, object detection, text classification, sentiment analysis, entity recognition, anomaly detection, demand forecasting, and more”); https://docs.uipath.com/ai-center/automation-cloud/latest/user-guide/about-ai-center (“AI Center is the infrastructure on top of which UiPath Document Understanding machine learning models run.”). As a particular example, UiPath AI Center uses UiPath Document Understanding to analyze, extract, interpret, and process data, from PDFs, images, handwriting, and scans. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models,</p>

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	<p>thereby increasing the potential for your automations.”); <i>id.</i> at 7 (“It’s also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Document Understanding analyzes data, including extracting and processing data from documents of many types. <i>See, e.g.</i>, UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 7 (“The artificial intelligence and document understanding features are very good and have been helpful when it comes to processing handwritten or unstructured [data], especially when there is a high volume and it is repetitive.”); <i>id.</i> at 8 (Document Understanding is “able to read handwriting with 90% to 95% accuracy.”); <i>id.</i> at 11 (“processing the PDF version of an invoice” involves “the capability to scan an invoice and then pick out the required fields, such as the name of the vendor, the details of the products being sent, or the cost of the product”); <i>id.</i> at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction can pull data from documents and feed it selectively into integrated systems”); <i>id.</i> at 15 (Document Understanding has the ability to extract data “in different formats” including native PDFs, scanned PDFs, handwritten invoices or pictures); UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, even when the type or format of the document changes”); <i>id.</i> at 5 (“They can ask for employee validation if needed and will automatically learn from the human validated data.”); “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> at 6 (“Document data is exported for further use in various systems according to your business needs.”); <i>id.</i> at 7 (“UiPath Document Understanding can use either a rule-based or a model-based approach, or those can be combined into a hybrid approach.”); <i>id.</i> (“A minimum confidence threshold is set for each document or field to define which extractor is optimal for a specific part.”); <i>id.</i> at 8 (“Whether your documents are structured, semi-structured, or unstructured, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills” and unstructured</p>

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	<p>documents with no fixed format such as “various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to extract document data from these special cases.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products analyze data.</p>
<p>1A. Generating, via a first user, a query based at least in part on a topic of interest;</p>	<p>All versions and implementations of UiPath products generate, via a first user, a query based at least in part on a topic of interest. This query may be a natural language query manually generated by a human user or generated from a query generator which may, for example, be based on a robot or AI.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communication Mining generates a query, via a first user, based at least in part on a topic of interest, including from the user, including, for example, generating a query based on taxonomies, labels wording, filters, or ads. <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 34:49-56) (“[S]o the first thing Communications Mining is telling me is can you upload a taxonomy, right? Can you upload a predefined list of labels that you want to look for . . .”); <i>id.</i> at 35:15-35:21 (“[S]o what Communications Mining has done is it’s looked through all of those emails, all of those hundred and thirteen thousand emails, and it’s created a cluster of similar looking emails, right, similar looking emails that all have similar wording.”).</p> <p>“UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”</p> <p>“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from inbound messages: intentions, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.” https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>See also UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is “a new form of enterprise software able to ‘<i>sift and analyze</i>’ at scale large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.”); <i>id.</i> (“<i>convert business communications</i> like emails into structured, machine-readable data. This data is then used for <i>real-time analysis</i> and automation.”); <i>id.</i> at 5 (“Imagine being able to <i>mine the useful information</i> in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a <i>specialized-trained large language model</i>, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications monitoring gives managers a <i>custom-filtered, real-time view</i> of all service channels— extracting the information <i>they care about most</i>. Built-in analytics allow managers to track <i>trends</i>, measure service quality and performance at all levels. <i>Custom, real-time alerts</i> enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 15 (“Communications mining can be an important component in <i>intelligent document processing (IDP)</i>. Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to <i>extract insight</i> from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p>

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	<h2>How does communications mining work?</h2> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data.</p> <p>It shows you what people are saying, how frequently they are saying it, and in what context.</p> <div> <div> <p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> </div> <div> <p>2</p> <p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> </div> <div> <p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> </div> <div> <p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> </div> <div> <p>5</p> <p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> </div> <div> <p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> </div> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p> <p>13</p> <p>For another example, UiPath Process Mining generates a query, via a first user, based at least in part on a topic of interest, including by giving “quick insight” into specific process metrics as chosen by the first user or generating a query based on taxonomies, labels wording, filters, or ads. <i>See, e.g.,</i> https://www.uipath.com/resources/automation-demo/process-mining-demo (Video at 1:58+); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”); https://www.uipath.com/product/process-mining (“<i>Use the data from your business applications</i> to give you a detailed understanding of complex business processes. You’ll know what to automate, how to improve your processes – and be able to prove impact, too.”); <i>id.</i> (“Process Mining - <i>analyze data from business applications</i> to understand end-to-end</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>processes”); <i>id.</i> (“Use KPIs to measure the impact automation has on end-to-end processes.”); https://www.uipath.com/blog/industry-solutions/how-process-mining-helps-banks-evolve (“Process mining objectively discovers processes. The technology analyzes processes in a very detailed way, providing specific observations and insights for improvement.”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining connects to source systems for a continuous view into how business processes are executed.”).</p> <p>“Process mining is a powerful technology that can help businesses gain visibility into their processes. It does this by tracing the digital footprints left behind in systems and applications. Process mining then transforms that raw data into intuitive visualizations of process flows. It makes those complex and wide-ranging processes, like procure-to-pay (P2P) and order-to-cash (O2C), tangible. With thorough and fact-based visualizations, you can spot process bottlenecks, inefficiencies, and risks, at a glance.” https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes</p> <p>See also UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4 (“In addition, process mining can break down silos of data about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now relate the candidate process to other tasks or processes to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.”).</p> <p>For another example, UiPath Task Mining generates a query, via a first user, based at least in part on a topic of interest, including by capturing specific activities based on a specified task. See, e.g., https://www.uipath.com/product/task-mining at Video (UiPath Task Mining involves “[a]nalyzing daily tasks of all the employees”, where the “first stage” is about collecting or “automatically capturing” data about tasks or activities; finally, analyzing those findings “by exporting findings into UiPath Studio or as a</p>

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	<p>detailed “Process Definition” document”); UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface <i>for users to ask/input queries</i> and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining, including “Task discovery and analysis,” such as “Define the to-be process model” and “Ability to allow users to create custom KPIs”); <i>id.</i> at 10 (listing strengths of UiPath Task Mining).</p> <p>UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to perform this element. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite generates a query, via a first user, based at least in part on a topic of interest, including test data generated and identified from usage data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to <i>generate and identify test data from usage data of your software apps.</i>”); <i>id.</i> (“UiPath enables testers to automate the <i>creation, maintenance, and updating of test data across different test environments.</i> Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management.</p>

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	<p>UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to <i>execute actions within the database such as transactions, queries, or non-queries</i> (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for <i>either retrieving or generating test data dynamically</i> during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, <i>specifically tailored to generate authentic and synthetic test data in various formats</i>, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to <i>generate test data, followed by the execution of test sets to ensure streamlined test execution.</i>”); <i>id.</i> at 6 (UiPath Test Suite can “<i>parameterize your test with data variables</i> and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data</i> across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p>

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	<p>For another example, UiPath Attended Robots generate, via a first user, a query based at least in part on a topic of interest, including by beginning an action based on information supplied by a user or other robot. <i>See, e.g.</i>, UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 6 (“a specific action you take triggers a robot to start a task”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath AI Center generates, via a first user, a query based at least in part on a topic of interest, including by recognizing or predicting patterns in documents and seeking validation of said recognition or prediction. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models,</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>thereby increasing the potential for your automations.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to <i>process structured documents</i>; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly generate, via a first user, a query based at least in part on a topic of interest. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p> <p>Rule 14 contends that this limitation is met literally. In the alternative, if not met literally (for example, if a first user is not a human person but instead a computer, AI query generator, or UiPath robot, and that is found not to infringe literally), UiPath accused products also satisfy this limitation under the doctrine of equivalents. Specifically, generating a query via a first user that is a computer, AI query generator, UiPath robot, or similar, performs substantially the same function as generating the query via a first human user (generation of query based on a topic of interest as determined by user regardless of type), in substantially the same way (via generating the query based on topic of interest or rules relevant to a topic of interest), to yield substantially the same result (completing the steps following query generation as outlined by the claim language) as the narrowed claim limitation.</p>
<p>1B. Expanding search terms of the query;</p>	<p>All versions and implementations of UiPath products expand search terms of the query, for example, based on natural language expansion and/or processing, search lexicons, expanding the search using misspellings, and/or derivations of the topic of interest/sub-topics. The lexicon may, for example, be generated based on user input, automatic word association, synonym/antonym trees, and/or lexicons of positive/negative modifiers. This expansion may be performed by a user and/or may be automated.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communication Mining expands search terms of the query, including to look for “similar looking emails” with “similar wording” (as examples). <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) (“[S]o what Communications Mining has done is it’s looked through all of those emails, all of those hundred and thirteen thousand emails, and it’s created a cluster of similar looking emails, <i>right, similar looking emails</i> that all have <i>similar</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p><i>wording.</i>”) (emphasis added); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of <i>a specially-trained large language model</i>, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”).</p> <p>UiPath Communication Mining also expands search terms of the query, including to determine intent, sentiment, and emotion included in communications. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from inbound messages: <i>intents, reasons for contact, sentiment, and emotion</i>. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> (“The development team is also enhancing the <i>product’s ability to extract intents</i>—like reasons for contact—from messages, and <i>recognize the relationship between multiple intents</i> and key data points like customer numbers, addresses, and dates.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where <i>each request is a separate ‘extraction’ containing the intent and all associated data.</i>”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<div><h2>How does communications mining work?</h2><p>Communications mining uses a combination of best-in-class AI models to turn messages into data.</p><p>It shows you what people are saying, how frequently they are saying it, and in what context.</p><div><div><div>1</div><p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p></div><div><div>2</div><p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p></div><div><div>3</div><p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p></div><div><div>4</div><p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p></div><div><div>5</div><p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p></div><div><div>6</div><p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p></div></div><p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p><p>13</p></div>
	<p>For another example, UiPath Process Mining expands search terms of the query, including by adding additional concepts to the initial query. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. <i>Analysis can be enhanced by adding other concepts to the minimal initial data set.</i> The result is then used for process discovery, conformance checking, and process enhancement.”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>“In addition, process mining can <i>break down silos of data</i> about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now <i>relate the candidate process to other tasks or processes</i> to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.” UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4.</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to expand search terms of the query. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite expands search terms of the query, including by retrieving or generating test data dynamically. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 5 (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath's core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution."); <i>id.</i> ("UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data."); <i>id.</i> at 6 (UiPath Test Suite can "parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it's a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.").</p> <p>UiPath products including UiPath's "Build/Automate" features also each perform this element.</p> <p>For example, UiPath Attended Robots expands search terms of the query, including by taking an action that instructs the robot to expand or share information on the query. <i>See, e.g.,</i> UiPath White Paper, "Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise," at 4 ("Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company's different systems for you to find what you need."); <i>id.</i> at 5 ("the robot works behind the scenes to get information and update other systems for you. UiPath Apps and</p>

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	<p>real-time forms <i>bring in relevant information from a variety of different systems</i>. They also allow the user to <i>take action on that information</i> by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>For another example, UiPath AI Center expands search terms of the query, including by obtaining a prediction related to the query. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, <i>the robot asks AI for a prediction</i>, supplying any required data from the process. <i>When the prediction is returned, the robot acts on the results</i> and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. <i>Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample</i>. But when enhanced with AI, <i>robots can learn to recognize patterns</i> in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 6 (“As your ML models are trained on data, they <i>recognize patterns and make predictions</i>. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, <i>making accurate predictions</i> based off automated document processes.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly expand search terms of the query as explained above—for example, based on search lexicons, expanding the search using misspellings, and/or derivations of the topic of interest/sub-topics. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
1C. Executing the query on a plurality of data sources;	<p>All versions and implementations of UiPath products execute the query on a plurality of data sources. These data sources can be private data sources, open-source data sources, or proprietary data sources. The execution of the query may be done on all available data sources or a subset of data sources.</p>

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	<p>In particular, as illustrative examples, UiPath products including UiPath's "Discover" features each perform this element.</p> <p>For example, UiPath Communications Mining executes the query on a plurality of data sources, including emails and other communications. <i>See, e.g.</i>, https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) ("[S]o what Communications Mining has done is it's looked through all of those emails, all of those hundred and thirteen thousand emails, and it's created a cluster of similar looking emails, right, similar looking emails that all have similar wording.") (emphasis added); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining ("Our LLM consistently and accurately extracts the most important information from masses of communications, and in a way that's safe and reliable for the enterprise."); <i>id.</i> ("UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from inbound messages: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels."); <i>id.</i> ("UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.").</p> <p>Data sources can be, for example, collections of data, such as email accounts, batches, folders or individual emails, any of which can be a data source in UiPath's accused products. <i>See, e.g.</i>, UiPath White Paper, "The Ultimate Guide to Communications Mining," at 4 (communications mining is described as "a new form of enterprise software able to 'sift and analyze at scale large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.'"); <i>id.</i> ("convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation."); <i>id.</i> at 5 ("Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale."); <i>id.</i> at 7 ("UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights."); <i>id.</i> at 9 ("UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate 'extraction' containing the intent and all associated data."); <i>id.</i> at 11 ("Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there's</p>

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	<p>a high volume of messages passing between colleagues, customers, suppliers, and partners. If there's a business department with a lot of shared mailboxes and systems, it's a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process."); <i>id.</i> at 17 ("Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it's designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can't do... Each is closely intertwined and works together."); <i>id.</i> at 13:</p> <p>How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <div> <div> <p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> </div> <div> <p>2</p> <p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> </div> <div> <p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> </div> <div> <p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> </div> <div> <p>5</p> <p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> </div> <div> <p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> </div> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> <p>For another example, UiPath Process Mining executes the query on a plurality of data sources, including across different systems. <i>See, e.g.,</i> https://www.uipath.com/rpa/what-is-process-mining ("Every enterprise system—like SAP, Salesforce or Oracle—captures event data related to your processes. Process mining reads this data and transforms it into an event log."); https://www.uipath.com/platform/discover/process-mining ("Analyze the digital footprint of processes across all systems, including SAP, Salesforce,</p>

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	<p>ServiceNow, Oracle, and custom systems.”); https://www.uipath.com/resources/automation-demo/process-mining-demo (Video at 2:10-2:20) (“As a start, my COE has opted to ingest about 410,000 rows of data from 40,000 purchase orders and as we scale process mining in P2P, my app can handle up to a billion rows of data.”); <i>id.</i> (“UiPath Process Mining reads the data in your line of business systems and applications...”).</p> <p>UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.” UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); <i>id.</i> at 10 (“product ensures a single source of truth by centralizing data and dashboard management”); <i>id.</i> at 11 (UiPath Process Mining was used “to evaluate more than 200,000 items, including purchase orders and invoices”). Data sources can be, for example, these various databases and enterprise systems as well as events logs made up of individual data, any of which can be a data source in UiPath’s accused products.</p> <p>For another example, UiPath Task Mining executes the query on a plurality of data sources, including across variations of a certain task. <i>See, e.g.</i>, https://www.uipath.com/resources/automation-demo/assisted-task-mining-demo (Video at 3:12) (“Gain a full picture of a task by analyzing the variations and merging them into a comprehensive task map”). UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to expand the search terms of the query. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task</p>

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	<p>mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite executes the query on a plurality of data sources, including different applications, databases, websites, or data sets. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>Activities) <i>and integrations into Postman</i>. This enables testing teams to <i>leverage external web services</i> (e.g., Mockaroo, Azure OpenAI, OpenAI) <i>and custom web services</i> (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath's core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources, such as websites and files</i>. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and <i>link it to an external data source</i> so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by <i>providing integrations with your preferred test data source, whether it's a database, structured file</i> (e.g., Excel, JSON), <i>or even a flat file</i>. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures, such as related and reusable records</i>. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and <i>integrating with external data sources or using built-in test data management tools</i>, you can efficiently manage data while minimizing redundancy.”).</p> <p>UiPath products including UiPath's “Build/Automate” features also each perform this element.</p> <p>For example, UiPath AI Center executes the query on a plurality of data sources, including different data and document types. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:30) (“AI Center analyzes PDFs, TIFFs, JPEGs, PNGs, JSON, and CSV and <i>every other data type</i> defined by your models”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (“Our pre-built models help robots understand and work with a <i>wide range of document types, including invoices, receipts, purchase orders, utility bills, passports, and contracts</i>.”); UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: <i>Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of</i></p>

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	<p><i>these documents at scale.</i> Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”).</p> <p>For another example, UiPath Data Service executes the query on a plurality of data sources, including by combining data sources in order to execute the query. <i>See, e.g.,</i> https://www.uipath.com/product/no-code-data-modeling (“<i>Ditch the data silos</i>, the security concerns, and one-off data schemas. And give developers simple, easy, productive access to the data, variables, and tools they need across the entire UiPath Platform... Integrate easily with any enterprise or legacy system, database, or custom app. Bring that data into a single, scalable, secure place with a drag-and-drop storage interface. Then make it click-simple to bring trustable, fresh, and consistent information into every automation. Seamlessly access and reuse data across multiple automations”).</p> <p>For another example, UiPath Document Understanding executes the query on a plurality of data sources, including a variety of different documents, document types, and system of documents. <i>See, e.g.,</i> https://www.uipath.com/product/document-understanding (processes “a <i>wide range of documents</i>”); <i>id.</i> (“Document Understanding framework enabling processing <i>different document types and structures</i> using UiPath Studio”); UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, even when <i>the type or format of the document changes</i>”); <i>id.</i> at 8 (“Whether your <i>documents are structured, semi-structured, or unstructured</i>, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like <i>tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills</i>” and unstructured documents with no fixed format such as “<i>various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts</i>”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to <i>extract document data from these special cases</i>.”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 13 (Document Understanding has the “ability to extract</p>

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Claim 1	UiPath Accused Products
	<p>data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction <i>can pull data from documents</i> and feed it selectively into integrated systems”); <i>id.</i> at 13:</p> <div> </div> <p>For another example, UiPath Attended Robots executes the query on a plurality of data sources, including processes, documents, and applications. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Easily embed automations in <i>each employee’s desktop or web applications</i> with Robot.JS. Use desktop triggers to set up robots that <i>monitor activities</i> behind the scenes and automatically start processes based on user actions.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “<i>log into applications</i>, move files and folders, copy and paste, fill in forms, <i>interact with data, and more</i>”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to <i>comb through your company’s different systems</i> for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms <i>bring in relevant information from a variety of different systems</i>. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information</i> as they work.”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly execute the query on a plurality of data sources. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>1D. Selecting at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds;</p>	<p>All versions and implementations of UiPath products select at least one data source from the plurality of data sources, for example the data sources disclosed above, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, for example any measurable threshold such as confidence thresholds.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communication Mining selects at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by selecting a data source with information that is considered “most relevant” to the query. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath gives businesses a custom-filtered, <i>real-time view of all service channels—extracting the information they care about most.</i> Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 5 (“Imagine being able to <i>mine the useful information</i> in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically <i>discover message clusters</i> that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining turns business conversations into actionable insights. It <i>extracts the most important data</i> from inbound messages: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<div><h2>How does communications mining work?</h2><p>Communications mining uses a combination of best-in-class AI models to turn messages into data.</p><p>It shows you what people are saying, how frequently they are saying it, and in what context.</p><div><div><p>1</p><p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p></div><div><p>2</p><p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p></div><div><p>3</p><p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p></div><div><p>4</p><p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p></div><div><p>5</p><p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p></div><div><p>6</p><p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p></div></div><p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p><p>13</p></div>
	<div><h2>Selecting label confidence thresholds</h2><h3>Introduction</h3><p>The platform is typically used in one of the first steps of an automated process: ingesting, interpreting and structuring an inbound communication, such as a customer email, much like a human would do when that email arrived in their inbox.</p><p>When the platform predicts which labels (or tags) apply to a communication, it assigns each prediction a confidence score (%) to show how confident it is that the label applies.</p><p>If these predictions are to be used to automatically classify the communication, however, there needs to be a binary decision - i.e. does this label apply or not? This is where confidence thresholds come in.</p><p>A confidence threshold is the confidence score (%) at or above which an RPA bot or other automation service will take the prediction from the platform as a binary 'Yes, this label does apply' and below which it will take the prediction as a binary 'No, this label does not apply'.</p><p>https://support.reinifer.io/support/solutions/articles/48001157667-selecting-label-confidence-thresholds</p></div>

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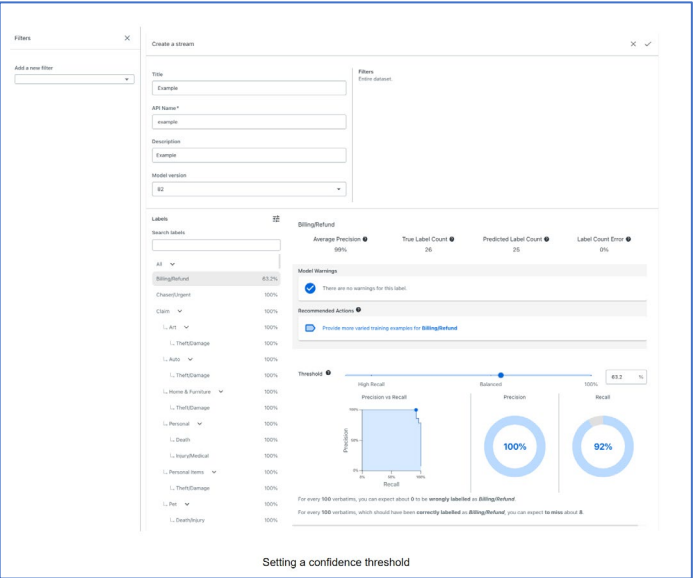
Claim 1	UiPath Accused Products
	<div></div> <p>https://support.reinfer.io/support/solutions/articles/48000982498-create-a-stream</p> <div><p>Here you can:</p><ul style="list-style-type: none">• Give the stream a title and a description• Set an API name• Specify the model (labeller) version to use (this is very important)• Use the filters bar on the left-hand-side to set user-property filters which must be satisfied for verbatims to enter the queue for the stream• Select a label and a confidence threshold as per below:</div> <p>https://support.reinfer.io/support/solutions/articles/48000982498-create-a-stream</p> <p>When UiPath Communications Mining selects a document as a data source, it has selected that data source as meeting the confidence threshold. If no document meets the confidence threshold, Communications Mining does not select that document as a data source.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>For another example, UiPath Process Mining selects at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by identifying “valuable” and “impactful” processes. <i>See, e.g.,</i> https://www.uipath.com/rpa/what-is-process-mining (“<i>Identifies the most valuable, impactful places to insert automation</i>”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can <i>identify problems</i>, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to <i>identify, monitor, and improve business processes</i>” and based on “event-log data, process mining algorithms <i>generate a model that shows the process as it really is, not as it is perceived</i>. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... <i>data connections available to multiple and/or different databases</i> ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.”); <i>id.</i> at 11 (UiPath Process Mining was used “to <i>evaluate more than 200,000 items</i>, including purchase orders and invoices”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate</p>

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Claim 1	UiPath Accused Products
	<p>process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite selects at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by “finding the right data.” UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“<i>To help with finding the right data</i>, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, <i>enabling scalable and efficient test data management</i>. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to <i>connect to a range of databases</i>, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to <i>execute actions within the database</i> such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to <i>leverage external web services</i> (e.g., Mockaroo, Azure OpenAI, OpenAI) <i>and custom web services</i> (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically during automated test execution</i> through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources</i>, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to</p>

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	<p>ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “<i>parameterize your test with data variables and link it to an external data source</i> so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly manage test data tailored to your testing needs</i>, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can <i>efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath Attended Robots select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including the data source with the needed information. <i>See, e.g.</i>, UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through <i>your company’s different systems</i> for you <i>to find what you need</i>.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in <i>relevant information from a variety of different systems</i>. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”).</p> <p>For another example, UiPath AI Center selects at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by validating predictions related to a data source. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. <i>When the prediction is returned, the robot acts on the results and continues the process to completion</i>. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> (“It’s also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Document Understanding selects at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including a confidence threshold for each document or field within a document. <i>See, e.g.</i>, UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 7 (“A minimum confidence threshold is set for each document or field to define which extractor is optimal for a specific part.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>1E. Monitoring, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added</p>	<p>All versions and implementations of UiPath products monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof. The monitoring may be performed by data extractors that monitor changes to a data source in real-time. When information at the data sources is updated or located to match the query terms, a data extractor extracts the data to be analyzed.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
data that matches the query, or a combination thereof; and	<p>In particular, as illustrative examples, UiPath products including UiPath's "Discover" features each perform this element.</p> <p>For example, UiPath Communications Mining monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including real-time monitoring of emails or other communications.</p> <p>See, e.g., UiPath White Paper, "The Ultimate Guide to Communications Mining," at 4 ("convert business communications like emails into structured, machine-readable data. This data is then used <i>for real-time analysis</i> and automation."); <i>id.</i> at 8 ("Communications Mining's Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service."; "Communications monitoring gives managers a <i>custom-filtered, real-time view of all service channels— extracting the information they care about most.</i> Built-in analytics allow managers to track trends, measure service quality and performance at all levels. <i>Custom, real-time alerts enable teams to respond to breaking issues</i> in an agile way."); see also https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (same; "UiPath gives businesses" this ability, "driving continuous improvement"; explaining how to "[m]onitor your communication"); <i>id.</i> at 13:</p> <p>How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data.</p> <p>It shows you what people are saying, how frequently they are saying it, and in what context.</p> <p>1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> <p>2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> <p>3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> <p>4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> <p>5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> <p>6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<div> <pre> graph TD Start((Start)) --> Read[Read batch of Communications from a stream] Read --> Unread{Unread emails?} Unread -- yes --> Add[Add them to Orchestrator queue] Add --> Mark[Mark batch of emails as read] Mark --> Read Unread -- no --> Stop((Stop)) </pre> </div> <p>https://www.youtube.com/watch?v=Qayl7M8u5AQ</p> <p> For another example, UiPath Process Mining monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including the continuous monitoring of processes to gain “real time insight”. <i>See, e.g.,</i> https://www.uipath.com/product/process-mining (“Continuous monitoring: Continuously adapt to changing conditions with complete and <i>real time insight into how processes are executed and KPI impact.</i>”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining benefits [...] Continuously monitor processes and measure improvements”); <i>id.</i> (“So you’ll have the facts you need to understand, improve, and monitor how things get done... anywhere they’re getting done.”); <i>id.</i> (“Continuously monitors automation performance and ROI”); https://www.uipath.com/platform/discover/process-mining (“Monitor KPIs via dashboards that track processes such as purchase-to-pay, order-to-cash, incident management, and others.”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis </p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that <i>tightly integrates process understanding and monitoring with the ability to act on insights with automation</i>. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>For another example, UiPath Automation Hub monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, through integration with other UiPath “Discover” features. <i>See, e.g.</i>, https://www.uipath.com/product/automation-hub</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>(“Crowdsource automation ideas or use Process Mining, Task Mining, and Communications Mining for data-driven discovery. Track everything from idea to production in one place—with visibility and control.”).</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Orchestrator monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including output of UiPath robots. <i>See, e.g., https://www.uipath.com/product/orchestrator</i> (“Orchestrator <i>tracks and logs everything every robot does, along with everything people do with robots</i>, so you can keep compliant and secure. Drill-down dashboards and UiPath Insights give you full visibility from deployment to ROI.”).</p> <p>For another example, UiPath Test Suite monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including by identifying and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and <i>identify test data</i> from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient <i>test data management</i>. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to <i>execute actions within the database</i> such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”)</p> <p>“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically</i> during automated test execution through low-code automation.” <i>Id.</i>; <i>id.</i> (“One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources</i>, such as websites and files. These capabilities</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly manage test data</i> tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can <i>efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Action Center monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including the monitoring of processes. <i>See, e.g.</i>, UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf (“Benefits of Using Action Center... <i>Monitor and manage processes from a portal.</i>”).</p> <p>For another example, UiPath AI Center monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including monitoring information and processes in order to act on the data. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“Continuously improve your models by bringing humans to handle exceptions, <i>validate data and send it for retraining.</i>”); <i>id.</i> (“<i>Constantly train and improve ML models using the human validated data.</i>”); <i>id.</i> (“Manage – <i>Monitor and manage your AI skills</i> ensuring the highest efficiency”); UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Attended Robots monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including the monitoring of processes and information in real-time. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Use desktop triggers to set up robots that monitor activities behind the scenes and automatically start processes based on user actions.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>For another example, UiPath Document Understanding monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including monitoring variable parts of documents. <i>See, e.g.</i>, UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, <i>even when the type or format of the document changes</i>”); <i>id.</i> at 6 (“Document data is <i>exported for further use</i> in various systems according to your business needs.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to six people, whose <i>job is to monitor the bots</i>” and “check to make sure that the <i>data being fetched using document understanding is at par.</i>”); <i>id.</i> at 10 (the human team “<i>monitor[s] the processes</i>”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>1F. Establishing a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source.</p>	<p>All versions and implementations of UiPath products establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source. A communication channel may be established with specific individuals, other users, and/or another entity such as a robot (both within the client organization and without), and based in part on the analyzed data.</p> <p>In particular, after extracting data from the at least one monitored data source via UiPath Communications Mining, all versions and implementations of UiPath products take the information and establish a communication channel with a second user.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including to</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>monitor and analyze the extracted data. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Business users then rapidly train the model, tailoring its output to the exact needs of the business.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>“UiPath Robots use the data created by Communications Mining to extend automation into service and conversation-based processes. This allows businesses to automate transactional requests and workflows. Tasks like triaging emails, updating customer information, and case creation are now automated from end to end by UiPath.” <i>Id.</i></p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.’”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels— extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

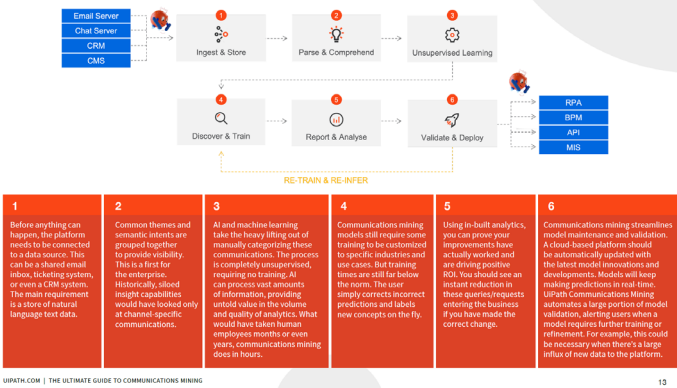
Claim 1	UiPath Accused Products
	<p>How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p>  <p>1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> <p>2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, added insight capabilities would have looked only at channel-specific communications.</p> <p>3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> <p>4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> <p>5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> <p>6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> <p>For another example, UiPath Process Mining establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by alerting the second user to information about processes. <i>See, e.g., https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes</i> (“With the latest integration between UiPath Process Mining and UiPath Action Center, you can proactively alert someone in UiPath Action Center whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for <i>controlled access to data</i>. It also <i>allows administrators to establish user roles for broad or very specific functions for groups or individuals.</i>").</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Insights establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by exporting the data for analysis. <i>See, e.g.</i>, https://www.uipath.com/product/rpa-insights (“<i>Export and analyze your Insights data with real-time data export to Splunk, PowerBI, and Elasticsearch.</i>”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>For another example, UiPath Test Suite establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by updating and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to <i>generate and identify test data from usage data of your software apps.</i>”); <i>id.</i> (“UiPath <i>enables testers to automate the creation, maintenance, and updating of test data across different test environments.</i> Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies <i>test data synchronization through integrated solutions</i> (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data <i>across multiple test environments and teams.</i>”); <i>id.</i> at 5 (“UiPath Database Activities <i>allow you to connect to a range of databases</i>, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This <i>enables you to execute actions within the database</i> such as transactions, queries, or non-queries (e.g., update, insert, delete) <i>to collect, generate, and/or modify test data.</i>”); <i>id.</i> (“UiPath simplifies API-related test data tasks by <i>offering connectors for external applications</i> via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This <i>enables testing teams to leverage</i> external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically</i> during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, <i>as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.</i>”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that <i>you can maintain just one automated test to execute multiple data variations.</i> UiPath Studio empowers you to perform Data-Driven Testing <i>by providing integrations with your preferred test data source</i>, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to <i>manage your test data directly</i> within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments.</i> The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>related and reusable records. These capabilities <i>empower you to effortlessly manage test data</i> tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, <i>you can efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Action Center establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, you can <i>proactively alert someone</i> in UiPath Action Center whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.”).</p> <p>For another example, UiPath AI Center establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including for use in monitoring and training. <i>See, e.g.,</i> UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, <i>manage, and improve machine learning models.</i>”); <i>id.</i> (“Continuously <i>improve your models by bringing humans to handle exceptions, validate data and send it for retraining.</i>”).</p> <p>UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, <i>the robot asks AI for a prediction</i>, supplying any required data from the process. When the prediction is returned, <i>the robot acts on the results</i> and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can <i>engage with models and validate predictions</i>, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data</i>, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”).</p> <p>For another example, UiPath Attended Robots establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including seeking input from human users. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”).</p> <p>“[P]eople and robots work together to accomplish a complex task”; alternatively, “robots will work on a task and loop in their human teammates to handle an exception or make a decision.” UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise”, at 2; <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Document Understanding establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by asking the second user for validation. <i>See, e.g.,</i> UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can ask for employee validation if needed and will automatically learn from the human validated data.”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”).</p> <p>UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to six people, whose job is to monitor the bots” and “check to make sure that the data being fetched using document understanding is at par.”); <i>id.</i> at 10 (the human team “monitor[s] the processes”); <i>id.</i> at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction can pull data from documents</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 1	UiPath Accused Products
	<p>and feed it selectively into integrated systems”); <i>id.</i> at 17 (with Document Understanding, “[p]eople can now delegate paperwork to software robots, while robots still go to humans for validation when it’s needed.”); <i>id.</i> at 13:</p> <div> <p>The diagram shows four document icons on the left, each with a different colored header (teal, pink, purple, orange). A long yellow arrow points from these documents to a central teal box labeled 'Document Understanding Data Extraction'. From this central box, four yellow arrows point to four colored boxes on the right: 'System A' (teal), 'System B' (pink), 'System C' (orange), and 'System D' (purple).</p> </div> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
<p>Claim 2Pre, The method of Claim 1, further comprising,</p>	<p>All versions and implementations of UiPath products practice the method of Claim 1. <i>See</i> Claim 1.</p>
<p>2A. Analyzing the extracted data; and</p>	<p>All versions and implementations of UiPath products analyze the extracted data.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining analyzes the extracted data, including data from emails and other communications. <i>See, e.g.,</i> https://www.uipath.com/product/communications-mining (“UiPath Communications Mining turns every message into actionable data, in real time and on any communications channel.”); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining is a new capability to understand and automate business communications. It uses state-of-the-art AI models to turn business messages—from emails to tickets—into actionable data. It does this in real time and on all major business communications channels.”).</p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale large volumes of communications data’ from multiple sources such as emails, surveys, tickets and social media feeds.”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<p>with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and <i>people ready to take it through a quick and easy training process.</i>"); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 17 ("Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it's <i>designed to extract insight from unstructured data</i>—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can't do... Each is closely intertwined and works together."); <i>id.</i> at 13:</p> <div> <h3>How does communications mining work?</h3> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <p>1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> <p>2 Common themes and semantic interests are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> <p>3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> <p>4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> <p>5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> <p>6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> <p>For another example, UiPath Process Mining analyzes the extracted data, including business applications data to understand end-to-end processes. <i>See, e.g.,</i> https://www.uipath.com/product/process-mining ("Use the data from your business applications to <i>give you a detailed understanding</i> of complex business processes. You'll know what to automate, how to improve your processes – and be able to prove impact, too."); <i>id.</i> ("Process Mining - <i>analyze data from business applications</i> to understand end-to-end processes"); https://www.uipath.com/blog/industry-solutions/how-process-mining-helps-banks-evolve ("Process mining objectively discovers processes. The technology <i>analyzes processes in a very detailed way</i>, providing specific observations and insights for improvement."); https://www.uipath.com/rpa/what-is-process-mining ("Process mining connects to source systems for a <i>continuous view</i> into how business processes are executed.").</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<p>“Process mining is a powerful technology that can help businesses <i>gain visibility</i> into their processes. It does this by tracing the digital footprints left behind in systems and applications. Process mining then <i>transforms that raw data into intuitive visualizations of process flows</i>. It makes those complex and wide-ranging processes, like procure-to-pay (P2P) and order-to-cash (O2C), tangible. With thorough and fact-based visualizations, you can spot process bottlenecks, inefficiencies, and risks, at a glance.” https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes.</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end <i>understanding of processes</i> so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (<i>uses “existing system data</i> to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. <i>Analysis can be enhanced</i> by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and <i>transform data</i> without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly <i>integrates process understanding</i> and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive <i>process understanding</i> solution.”); <i>id.</i> at 11 (UiPath Process Mining was <i>used “to evaluate</i> more than 200,000 items, including purchase orders and invoices”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4 (“In addition, process mining can <i>break down silos of data about how different systems and parts of the organization work and interact</i>. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now relate the candidate process to other tasks or processes to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.”); <i>id.</i> at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that <i>provides a comprehensive mix of discovery, analysis,</i> and execution capabilities. The goal is to <i>fully understand your processes</i>, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>For another example, UiPath Task Mining analyzes the extracted data, including data regarding employees' desktop activities to determine improvement opportunities. <i>See, e.g.,</i> https://www.uipath.com/product/task-mining (“Get an objective data-driven picture of as-is processes, quicker and with fewer resources involved.”); <i>id.</i> at Video (analyzing daily task of employees to scale up automations; “the first stage is all about collecting” – automatically collecting and upload data from employees' computers and then analyzing those findings “by exporting findings into UiPath Studio or as a detailed “Process Definition” document”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath's “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Orchestrator analyzes the extracted data, including as the centralized hub to deploy, manage, and govern all the UiPath Robots, both attended and unattended, which function to analyze data by teaching robots new AI skills, including reading documents, recognizing dynamic interfaces and understanding conversations to make complex decisions.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<p>https://docs.uipath.com/orchestrator/standalone/2023.4/user-guide/about-robots. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Use desktop triggers to set up robots that monitor activities behind the scenes and automatically start processes based on user actions.”); <i>id.</i> (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”).</p> <p>UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 2 (“people and robots work together to accomplish a complex task” or “robots will work on a task and loop in their human teammates to handle an exception or make a decision”; “people and robots work together and share a computer and its resources”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Insights analyzes the extracted data, including by enabling businesses to track, measure, and manage performance of an automation program. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-insights (“UiPath Insights is an RPA analytics solution that enables your business to track, measure, and manage the performance of your entire automation program—so you can scale your automation journey to the next level.”); <i>id.</i> (“Visualize automation complexity, estimated costs, and benefits of your projects with the Automation Hub integration. Compare estimated vs actual ROI of automation ideas.”); <i>id.</i> (“Measure and report on the performance of document-processing automations with an integration with Document Understanding”); <i>id.</i> at Insights Brochure (“Situational awareness of your RPA operations is critical to being able to measure and analyze everything from Robot and process performance, to transactions and exceptions. Start with the Robots, Queues, and Processes dashboards to get deeper visibility into your RPA operations.”); <i>id.</i> (“Track and measure automation performance[:] Start out with a library of customizable pre-built dashboard templates to track your robots, queues, and processes. With self-serve analytics, you and your team can measure and forecast the performance of each robot to make informed decisions that reduce errors, maximize usage, and improve efficiency.”).</p>

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Claim 2	UiPath Accused Products
	<p>For another example, UiPath Test Suite analyzes the extracted data, including test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath</p>

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	<p>Studio and integrating with external data sources or using built-in test data management tools, <i>you can efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath Action Center analyzes the extracted data, including by integrating other UiPath products. <i>See, e.g.</i>, UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf (“Action Center gives you management tools to monitor processes from start to finish, <i>identify</i>, and resolve resource bottlenecks.”); https://docs.uipath.com/action-center/automation-cloud/latest/user-guide/introduction (“Action Center offers business users <i>a way to handle actionable items</i>, and provide business inputs to Robots”).</p> <p>For another example, UiPath AI Center analyzes the extracted data, including by deploying, consuming, managing, and improving machine learning models. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you <i>orchestrate all moving pieces</i> of AI - deploy, consume, manage, and improve machine learning models.”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:03) (“AI Center has machine learning (ML) automations, including <i>document processing, object detection, text classification, sentiment analysis, entity recognition, anomaly detection, demand forecasting, and more</i>”); https://docs.uipath.com/ai-center/automation-cloud/latest/user-guide/about-ai-center (“AI Center is the infrastructure on top of which UiPath Document Understanding machine learning models run.”).</p> <p>As a particular example, UiPath AI Center uses UiPath Document Understanding to analyze, extract, interpret, and process data, from PDFs, images, handwriting, a scans. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and <i>then accurately process the information</i> within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When <i>the prediction is</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<p><i>returned, the robot acts on the results and continues the process to completion.</i> The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data, they recognize patterns and make predictions</i>. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“It’s also important to note that your ML models are best when <i>working with the most relevant data</i>. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to <i>process structured documents</i>; adding AI takes the automation even further, <i>making accurate predictions</i> based off automated document processes.”).</p> <p>For another example, UiPath Document Understanding analyzes the extracted data, including extracting and processing data from documents of many types. <i>See, e.g.</i>, UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 7 (“The artificial intelligence and document understanding features are very good and have been helpful when it comes to <i>processing handwritten or unstructured [data]</i>, especially when there is a high volume and it is repetitive.”); <i>id.</i> at 8 (Document Understanding is “<i>able to read handwriting</i> with 90% to 95% accuracy.”); <i>id.</i> at 11 (“processing the PDF version of an invoice” involves “the capability to scan an invoice and then <i>pick out the required fields</i>, such as the name of the vendor, the details of the products being sent, or the cost of the product”); <i>id.</i> at 13 (Document Understanding has the “<i>ability to extract data from documents for use in downstream workflows</i>” and “<i>extract[s] the data into different types</i>”; “Data extraction can pull data from documents and <i>feed it selectively into integrated systems</i>”); <i>id.</i> at 15 (Document Understanding has the ability to <i>extract data “in different formats”</i> including native PDFs, scanned PDFs, handwritten invoices or pictures).</p> <p>UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can ask for employee validation if needed and will <i>automatically learn from the human validated data</i>.”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> at 6 (“Document data is <i>exported for further use in various systems according to your business needs</i>.”); <i>id.</i> (“A minimum confidence threshold is set for each</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<p>document or field to define <i>which extractor is optimal for a specific part.</i>"); <i>id.</i> at 8 ("Whether your documents are structured, semi-structured, or unstructured, UiPath Document Understanding can teach robots to read, analyze, and process your documents."); <i>id.</i> at 8 ("UiPath Document Understanding offers other solutions for processing less structured documents" including structured documents that contain "handwritten text, signatures, checkboxes," semi-structured documents that contain "fixed and variable parts like tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills" and unstructured documents with no fixed format such as "various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts"); <i>id.</i> ("For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction."); <i>id.</i> at 10 ("Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We're ready for that possibility. UiPath Document Understanding offers solutions that can be used to extract document data from these special cases.").</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly analyze the extracted data. This element is "a software limitation" as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>2B. Receiving feedback from the user based at least in part on the established communication channel.</p>	<p>All versions and implementations of UiPath products receive feedback from the user based at least in part on the established communication channel. A communication channel may be established with specific individuals and/or other users, and/or another entity such as a robot (both within the client organization and without), and based in part on analyzing the extracted data. Users can be human users, computers, AI-generated users, UiPath robots, or other user types.</p> <p>In particular, after extracting data from the at least one monitored data source via Communications Mining, all versions and implementations of UiPath products receive feedback from the user based at least in part on the established communication channel.</p> <p>In particular, as illustrative examples, UiPath products including UiPath's "Discover" features each perform this element.</p> <p>For example, UiPath Communications Mining receives feedback from the user based at least in part on the established communication channel, including to monitor and analyze the extracted data. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining ("Business users then rapidly train the model, tailoring its output to the exact needs of the business."); <i>id.</i> ("UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<p>care about most. Built-in analytics allow <i>process owners to track trends and measure service quality and performance</i> at all levels. Custom real-time alerts <i>enable teams to respond to breaking issues</i> in an agile way, driving continuous improvement.”).</p> <p>“<i>UiPath Robots use the data created by Communications Mining</i> to extend automation into service and conversation-based processes. This allows businesses to automate transactional requests and workflows. Tasks like triaging emails, updating customer information, and case creation are now automated from end to end by UiPath.” <i>Id.</i></p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (“convert business communications like emails into structured, machine-readable data. This data is then <i>used for real-time analysis and automation.</i>”); <i>id.</i> at 5 (“Imagine being able to <i>mine the useful information</i> in these messages, <i>discovering unknown processes, data points and automation opportunities.</i> This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“<i>UiPath Communications Mining uses Specialized AI</i>, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining <i>continuously retrains to discover new and valuable insights.</i>”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics <i>allow managers to track trends, measure service quality and performance at all levels.</i> Custom, real-time alerts enable teams to <i>respond to breaking issues</i> in an agile way.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its <i>Generative Extraction feature uses Generative AI to create a structured output</i>, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and <i>people ready to take it through a quick and easy training process.</i>”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<div> <h3>How does communications mining work?</h3> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <ol style="list-style-type: none"> Before anything can happen, the platform needs to be connected to a data source. This can be a shared email, inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel specific communications. AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business. If you have made the correct change. Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p> </div> <p>For another example, UiPath Process Mining receives feedback from the user based at least in part on the established communication channel, including by alerting the second user to information about processes. See, e.g., https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially <i>works by bringing humans into the automation loop</i> to manage exceptions, issue approvals, and process escalations.”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and <i>establish a cycle of continuous monitoring and improvement</i>”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The <i>result is then used for process discovery, conformance checking, and process enhancement.</i>”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the <i>ability to act on insights with automation.</i> This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<p>databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for <i>controlled access to data</i>. It also <i>allows administrators to establish user roles for broad or very specific functions for groups or individuals.</i>").</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to receive feedback from the user based at least in part on the established communication channel. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Insights receives feedback from the user based at least in part on the established communication channel, including by exporting the data for analysis. <i>See, e.g.</i>, https://www.uipath.com/product/rpa-insights (“<i>Export and analyze your Insights data</i> with real-time data export to Splunk, PowerBI, and Elasticsearch.”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<p>For another example, UiPath Test Suite receives feedback from the user based at least in part on the established communication channel, including by updating and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to <i>generate and identify test data from usage data of your software apps.</i>”); <i>id.</i> (“UiPath <i>enables testers to automate the creation, maintenance, and updating of test data across different test environments.</i> Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies <i>test data synchronization through integrated solutions</i> (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data <i>across multiple test environments and teams.</i>”); <i>id.</i> at 5 (“UiPath Database Activities <i>allow you to connect to a range of databases</i>, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This <i>enables you to execute actions within the database</i> such as transactions, queries, or non-queries (e.g., update, insert, delete) <i>to collect, generate, and/or modify test data.</i>”); <i>id.</i> (“UiPath simplifies API-related test data tasks by <i>offering connectors for external applications</i> via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This <i>enables testing teams to leverage</i> external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically</i> during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, <i>as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.</i>”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that <i>you can maintain just one automated test to execute multiple data variations.</i> UiPath Studio empowers you to perform Data-Driven Testing <i>by providing integrations with your preferred test data source</i>, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to <i>manage your test data directly</i> within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments.</i> The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities <i>empower you to effortlessly manage test data</i> tailored to</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<p>your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, <i>you can efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Action Center receives feedback from the user based at least in part on the established communication channel, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.”).</p> <p>For another example, UiPath AI Center receives feedback from the user based at least in part on the established communication channel, including for use in monitoring and training. <i>See, e.g.,</i> UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, <i>manage, and improve machine learning models.</i>”); <i>id.</i> (“Continuously <i>improve your models by bringing humans to handle exceptions, validate data and send it for retraining.</i>”; “Constantly train and improve ML models using the <i>human validated data.</i>”); <i>id.</i> (“Manage – <i>Monitor and manage your AI skills</i> ensuring the highest efficiency”).</p> <p>UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, <i>the robot asks AI for a prediction,</i> supplying any required data from the process. When <i>the prediction is returned, the robot acts on the results</i> and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. <i>You can manage your models and track their progress.</i> You can <i>engage with models and validate predictions,</i> increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data,</i> they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“<i>Human users validate low-confidence predictions made by the model and</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<p><i>reroute incorrect predictions for retraining.</i> This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”).</p> <p>For another example, UiPath Attended Robots receive feedback from the user based at least in part on the established communication channel, including seeking input from human users. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, <i>robots present data to employees and source their input to use it further in the automation process.</i>”).</p> <p><i>“[P]eople and robots work together</i> to accomplish a complex task”; alternatively, <i>“robots will work on a task and loop in their human teammates</i> to handle an exception or make a decision.” UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise”, at 2; <i>id.</i> at 4 (robots “log into applications, move files and folders, copy and paste, fill in forms, <i>interact with data</i>, and more”); <i>id.</i> (“Need some information on a client for an upcoming meeting? <i>You can ask your robot coworker</i> to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (<i>“the robot works behind the scenes to get information and update other systems for you.</i> UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also <i>allow the user to take action on that information</i> by updating those system[s] <i>on behalf of the user.</i>”); <i>id.</i> at 6 (“a <i>specific action you take triggers a robot</i> to start a task”); <i>id.</i> at 7 (<i>“Multiple robots work together</i> to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>For another example, UiPath Document Understanding receives feedback from the user based at least in part on the established communication channel, including by asking the second user for validation. <i>See, e.g.,</i> UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can <i>ask for employee validation if needed and will automatically learn from the human validated data.</i>”; “The more <i>you work with these models</i>, the more trained and accurate they become.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be <i>paired with our rich ecosystem of partners</i> to meet your needs in unstructured data extraction.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 15 (“Communications mining can be an important component in intelligent document processing (IDP). Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”).</p> <p>UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to <i>six</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 2	UiPath Accused Products
	<p><i>people, whose job is to monitor the bots” and “check to make sure that the data being fetched using document understanding is at par.”); id. at 10 (the human team “monitor[s] the processes”); id. at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction can pull data from documents and feed it selectively into integrated systems”); id. at 17 (with Document Understanding, “[p]eople can now delegate paperwork to software robots, while robots still go to humans for validation when it’s needed.”); id. at 13:</i></p> <div> <pre> graph LR subgraph Documents D1[Document 1] D2[Document 2] D3[Document 3] D4[Document 4] end subgraph Systems SA[System A] SB[System B] SC[System C] SD[System D] end DUE[Document Understanding Data Extraction] D1 --> DUE D2 --> DUE D3 --> DUE D4 --> DUE DUE --> SA DUE --> SB DUE --> SC DUE --> SD </pre> </div> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly receives feedback from the user based at least in part on the established communication channel. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 3	UiPath Accused Products
Claim 3Pre. The method of Claim 2, further comprising,	All versions and implementations of UiPath products practice the method of Claim 2. <i>See</i> Claim 2.
3A. Visualizing at least the extracted data, the analyzed data, or a combination thereof.	<p>All versions and implementations of UiPath products visualize at least the extracted data, the analyzed data, or a combination thereof.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining visualizes at least the extracted data, the analyzed data, or a combination thereof, including data from emails and other communications. <i>See, e.g.,</i> https://www.uipath.com/product/communications-mining (“UiPath Communications Mining turns every message into actionable data, in real time and on any communications channel.”); <i>id.</i> (“Communications Mining gives businesses insight into previously hidden processes and channels.”); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining is a new capability to understand and automate business communications. It uses state-of-the-art AI models to turn business messages—from emails to tickets—into actionable data. It does this in real time and on all major business communications channels.”).</p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale large volumes of communications data’ from multiple sources such as emails, surveys, tickets and social media feeds.”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels– extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 3	UiPath Accused Products
	<p>Extraction feature uses Generative AI to <i>create a structured output</i>, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s <i>designed to extract insight from unstructured data</i>—specifically communications data like emails, service requests, and support tickets. It <i>automates conversational business processes</i>; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p> <div> <h3>How does communications mining work?</h3> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <ol style="list-style-type: none"> Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications. AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change. Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div> <p>For another example, UiPath Process Mining visualizes at least the extracted data, the analyzed data, or a combination thereof, including business applications data to understand end-to-end processes. <i>See, e.g.,</i> https://www.uipath.com/product/process-mining (“Use the data from your business applications to <i>give you a detailed understanding</i> of complex business processes. You’ll know what to automate, how to improve your processes – and be able to prove impact, too.”); <i>id.</i> (“Process Mining - <i>analyze data from business applications</i> to understand end-to-end processes”); https://www.uipath.com/blog/industry-solutions/how-process-mining-helps-banks-evolve (“Process mining objectively discovers processes. The technology <i>analyzes processes in a very detailed way, providing specific observations and insights for improvement.</i>”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining connects to source systems for a <i>continuous view into how business processes are executed.</i>”).</p>

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	<p>“Process mining is a powerful technology that can help businesses <i>gain visibility</i> into their processes. It does this by tracing the digital footprints left behind in systems and applications. Process mining then <i>transforms that raw data into intuitive visualizations of process flows</i>. It <i>makes those complex and wide-ranging processes</i>, like procure-to-pay (P2P) and order-to-cash (O2C), <i>tangible</i>. With <i>thorough and fact-based visualizations</i>, you can spot process bottlenecks, inefficiencies, and risks, at a glance.” https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes.</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “<i>end-to-end understanding of processes</i> so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (<i>uses “existing system data</i> to identify, monitor, and improve business processes” and <i>based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived</i>. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly <i>integrates process understanding</i> and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 10 (“product ensures <i>a single source of truth by centralizing data</i> and dashboard management”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the <i>most comprehensive process understanding</i> solution.”); <i>id.</i> at 11 (UiPath Process Mining was <i>used “to evaluate</i> more than 200,000 items, including purchase orders and invoices”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4 (“In addition, process mining can <i>break down silos of data about how different systems and parts of the organization work and interact</i>. While the first generation of automation was focused on a single task or process, <i>process mining aggregates data from all these systems and workflows</i>. You can now relate the candidate process to other tasks or processes to <i>create full visibility</i> into end-to-end processes - such as order management or procurement – that span systems and departments.”); <i>id.</i> at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that <i>provides a comprehensive mix of discovery, analysis</i>, and execution capabilities. The goal is to <i>fully understand your processes</i>, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>For another example, UiPath Task Mining visualizes at least the extracted data, the analyzed data, or a combination thereof, including data regarding employees' desktop activities to determine improvement opportunities. <i>See, e.g.,</i> https://www.uipath.com/product/task-mining (“Get an objective data-driven picture of as-is processes, quicker and with fewer resources involved.”); <i>id.</i> at Video (analyzing daily task of employees to scale up automations; “the first stage is all about collecting” – automatically collecting and upload data from employees’ computers and <i>then analyzing those findings “by exporting findings into UiPath Studio or as a detailed “Process Definition” document</i>”).</p> <p>UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to visualize at least the extracted data, the analyzed data, or a combination thereof. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Orchestrator visualizes at least the extracted data, the analyzed data, or a combination thereof, including as the centralized hub to deploy, manage, and govern all the UiPath Robots, both attended and unattended, which function to analyze data by teaching robots new AI skills,</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>including reading documents, recognizing dynamic interfaces and understanding conversations to make complex decisions. https://docs.uipath.com/orchestrator/standalone/2023.4/user-guide/about-robots. See, e.g., https://www.uipath.com/product/attended-automation (“Use desktop triggers to set up robots that monitor activities behind the scenes and automatically start processes based on user actions.”); <i>id.</i> (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”); https://www.uipath.com/product/orchestrator (“Orchestrator tracks and logs everything every robot does, along with everything people do with robots, so you can keep compliant and secure.”).</p> <p>UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”).</p> <p>For another example, UiPath Insights visualizes at least the extracted data, the analyzed data, or a combination thereof, including by enabling businesses to track, measure, and manage performance of an automation program. See, e.g., https://www.uipath.com/product/rpa-insights (“UiPath Insights is an RPA analytics solution that enables your business to track, measure, and manage the performance of your entire automation program—so you can scale your automation journey to the next level.”); <i>id.</i> (“Visualize automation complexity, estimated costs, and benefits of your projects with the Automation Hub integration. Compare estimated vs actual ROI of automation ideas.”); <i>id.</i> (“Measure and report on the performance of document-processing automations with an integration with Document Understanding”); <i>id.</i> at Insights Brochure (“Situational awareness of your RPA operations is critical to being able to measure and analyze everything from Robot and process performance, to transactions and exceptions. Start with the Robots, Queues, and Processes dashboards to get deeper visibility into your RPA operations.”); <i>id.</i> (“Track and measure automation performance[:]. Start out with a library of customizable pre-built dashboard templates to track your robots, queues, and processes. With self-serve analytics, you and your team can measure and forecast the performance of each robot to make informed decisions that reduce errors, maximize usage, and improve efficiency.”).</p> <p>For another example, UiPath Test Suite visualizes at least the extracted data, the analyzed data, or a combination thereof, including the test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and</p>

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	<p><i>identify test data from usage data of your software apps.”); id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p>

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	<p>UiPath products including UiPath's "Build/Automate" features also each perform this element.</p> <p>For example, UiPath Action Center visualizes at least the extracted data, the analyzed data, or a combination thereof, including by integrating other UiPath products. <i>See, e.g.</i>, UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf ("Action Center gives <i>you management tools to monitor processes from start to finish</i>, identify, and resolve resource bottlenecks."); https://docs.uipath.com/action-center/automation-cloud/latest/user-guide/introduction ("Action Center offers business users <i>a way to handle actionable items</i>, and provide business inputs to Robots").</p> <p>For another example, UiPath AI Center visualizes at least the extracted data, the analyzed data, or a combination thereof, including by deploying, consuming, managing, and improving machine learning models. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure ("UiPath AI Center helps you <i>orchestrate all moving pieces</i> of AI - deploy, consume, manage, and improve machine learning models."); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:03) ("AI Center has machine learning (ML) automations, including <i>document processing, object detection, text classification, sentiment analysis, entity recognition, anomaly detection, demand forecasting, and more</i>"); https://docs.uipath.com/ai-center/automation-cloud/latest/user-guide/about-ai-center ("AI Center is the infrastructure on top of which UiPath Document Understanding machine learning models run.").</p> <p>As a particular example, UiPath AI Center uses UiPath Document Understanding to visualize at least the extracted data, the analyzed data, or a combination thereof, including to extract, interpret, and process data, from PDFs, images, handwriting, and scans. <i>See, e.g.</i>, UiPath White Paper, "Bringing the Power of AI and RPA Together with AI Center," at 4 ("Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, <i>robots can learn to recognize patterns in unstructured documents and then accurately process the information</i> within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity."); <i>id.</i> at 6 ("AI Center <i>helps you orchestrate all moving pieces</i> of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time."); <i>id.</i> at 6 ("As your ML models are <i>trained on data, they recognize patterns and</i></p>

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	<p><i>make predictions.</i> This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to <i>process structured documents</i>; adding AI takes the automation even further, <i>making accurate predictions</i> based off automated document processes.”).</p> <p>For another example, UiPath Document Understanding visualizes at least the extracted data, the analyzed data, or a combination thereof, including extracting and processing data from documents of many types. <i>See, e.g.</i>, UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 7 (“The artificial intelligence and document understanding features are very good and have been helpful when it comes to <i>processing handwritten or unstructured [data]</i>, especially when there is a high volume and it is repetitive.”); <i>id.</i> at 8 (Document Understanding is “<i>able to read handwriting</i> with 90% to 95% accuracy.”); <i>id.</i> at 11 (“processing the PDF version of an invoice” involves “<i>the capability to scan an invoice and then pick out the required fields</i>, such as the name of the vendor, the details of the products being sent, or the cost of the product”); <i>id.</i> at 13 (Document Understanding has the “<i>ability to extract data from documents for use in downstream workflows</i>” and “<i>extract[s] the data into different types</i>”; “Data extraction can pull data from documents and <i>feed it selectively into integrated systems</i>”); <i>id.</i> at 15 (Document Understanding has the ability to <i>extract data “in different formats”</i> including native PDFs, scanned PDFs, handwritten invoices or pictures).</p> <p>UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can ask for employee validation if needed and will <i>automatically learn from the human validated data.</i>”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> at 6 (“Document data is <i>exported for further use in various systems according to your business needs.</i>”); <i>id.</i> (“A minimum confidence threshold is set for each document or field to define <i>which extractor is optimal for a specific part.</i>”); <i>id.</i> at 8 (“Whether your documents are structured, semi-structured, or unstructured, UiPath Document Understanding can teach robots to <i>read, analyze, and process your documents.</i>”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for <i>processing less structured documents</i>” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills” <i>and unstructured documents with no fixed format</i> such as “various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding <i>can be paired with our rich ecosystem of partners to meet your needs in</i></p>

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Claim 3	UiPath Accused Products
	<p><i>unstructured data extraction.</i>”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be <i>used to extract document data from these special cases.</i>”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly visualize at least the extracted data, the analyzed data, or a combination thereof. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 4	UiPath Accused Products
<p>Claim 4Pre. The method of Claim 1, in which,</p>	<p>All versions and implementations of UiPath products practice the method of Claim 1. <i>See</i> Claim 1.</p>
<p>4A. Expanding the query comprises expanding the search terms to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof.</p>	<p>All versions and implementations of UiPath products expand the query comprising of expanding the search terms to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, for example, based on search lexicons, expanding the search using misspellings, and/or derivations of the topic of interest/sub-topics. The lexicon may be generated based on user input, automatic word association, synonym/antonym trees, and/or lexicons of positive/negative modifiers. This expansion may be performed by a user and/or may be automated.</p> <p>In particular, as illustrative examples, UiPath products including UiPath's "Discover" features each perform this element.</p> <p>For example, UiPath Communication Mining expands the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including by looking for "similar looking emails" with "similar wording" (as examples). <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) ("[S]o what Communications Mining has done is it's looked through all of those emails, all of those hundred and thirteen thousand emails, and it's created a cluster of similar looking emails, right, similar looking emails that all have similar wording.") (emphasis added); UiPath White Paper, "The Ultimate Guide to Communications Mining," at 5 ("Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale."); <i>id.</i> at 7 ("UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights."); <i>id.</i> at 11 ("Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there's a high volume of messages passing between colleagues, customers, suppliers, and partners. If there's a business department with a lot of shared mailboxes and systems, it's a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process.").</p> <p>UiPath Communication Mining also expands the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including to determine intent, sentiment, and</p>

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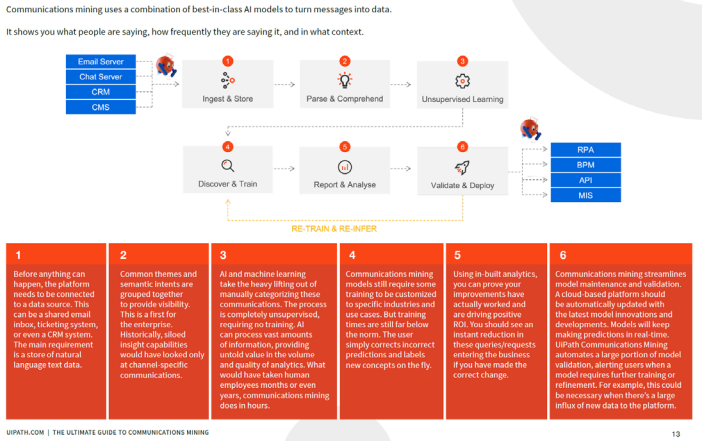
Claim 4	UiPath Accused Products
	<p>emotion included in communications. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from inbound messages: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> (“The development team is also enhancing the product’s ability to extract intents—like reasons for contact—from messages, and recognize the relationship between multiple intents and key data points like customer numbers, addresses, and dates.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 13:</p> <p style="text-align: center;">How does communications mining work?</p>  <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <p>1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> <p>2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> <p>3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human years, communications mining does in hours.</p> <p>4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> <p>5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> <p>6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> <p>For another example, UiPath Process Mining expands the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including by adding additional concepts to the initial query. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 4	UiPath Accused Products
	<p>“In addition, process mining can <i>break down silos of data</i> about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now <i>relate the candidate process to other tasks or processes</i> to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.” UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4.</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to expand the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite expands the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including by retrieving or generating test data</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 4	UiPath Accused Products
	<p>dynamically. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 5 (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either <i>retrieving or generating test data dynamically during automated test execution</i> through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources</i>, such as websites and files. These capabilities not only <i>mitigate manual processes, but also reduce errors</i> during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to <i>generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings</i>. For example, as part of your CI/CD pipeline, <i>these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.</i>”); <i>id.</i> (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This <i>enables you to execute actions within the database such as transactions, queries, or non-queries</i> (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> at 6 (UiPath Test Suite can “<i>parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations</i>. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to <i>define custom data models and manage complex data structures, such as related and reusable records</i>. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath Attended Robots expand the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including by taking an action that instructs the robot to expand or share information on the query. <i>See, e.g.</i>, UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 4	UiPath Accused Products
	<p>Enterprise,” at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker <i>to comb through your company’s different systems</i> for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms <i>bring in relevant information from a variety of different systems</i>. They also allow the user to <i>take action on that information</i> by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>For another example, UiPath AI Center expands the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including by obtaining a prediction related to the query. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is <i>often poorly suited to rules based automations because of the significant differences found from sample to sample</i>. But when enhanced with AI, robots can <i>learn to recognize patterns in unstructured documents and then accurately process the information</i> within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, <i>increasing model accuracy</i> over time.”); <i>id.</i> at 7 (“Human users <i>validate low-confidence predictions made by the model and reroute incorrect predictions for retraining</i>. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly expand the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof as explained above. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 5	UiPath Accused Products
Claim 5Pre. The method of Claim 1, further comprising,	All versions and implementations of UiPath products practice the method of Claim 1. <i>See</i> Claim 1.
5A. Refining the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query.	<p>All versions and implementations of UiPath products refine the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining refines the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query, for example, to train the model or to track trends and performance. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Business users then rapidly train the model, tailoring its output to the exact needs of the business.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 5	UiPath Accused Products
	<div> <h3>How does communications mining work?</h3> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <div> <div> <p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> </div> <div> <p>2</p> <p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> </div> <div> <p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> </div> <div> <p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> </div> <div> <p>5</p> <p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> </div> <div> <p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> </div> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p> <p>13</p> </div> <p>For another example, UiPath Process Mining refines the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query, including by alerting the second user to information about processes. <i>See, e.g., https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes</i> (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially <i>works by bringing humans into the automation loop</i> to manage exceptions, issue approvals, and process escalations.”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and <i>establish a cycle of continuous monitoring and improvement</i>”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The <i>result is then used for process discovery, conformance checking, and process enhancement</i>.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 5	UiPath Accused Products
	<p>monitoring with the <i>ability to act on insights with automation</i>. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for <i>controlled access to data</i>. It also <i>allows administrators to establish user roles for broad or very specific functions for groups or individuals</i>.”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to refine the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Insights refines the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query, including by exporting the</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 5	UiPath Accused Products
	<p>data for analysis. See, e.g., https://www.uipath.com/product/rpa-insights (“<i>Export and analyze your Insights data</i> with real-time data export to Splunk, PowerBI, and Elasticsearch.”).</p> <p>For another example, UiPath Test Suite refines the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query, including by identifying and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and <i>identify test data</i> from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient <i>test data management</i>. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to <i>execute actions within the database</i> such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”)</p> <p>“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically</i> during automated test execution through low-code automation.” <i>Id.</i>; <i>id.</i> (“One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources</i>, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 5	UiPath Accused Products
	<p><i>data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly manage test data</i> tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can <i>efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Action Center refines the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.”).</p> <p>For another example, UiPath AI Center refines the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query, including for use in monitoring and training. <i>See, e.g.,</i> UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, manage, and <i>improve machine learning models</i>.”); <i>id.</i> (“Continuously <i>improve your models by bringing humans to handle exceptions, validate data and send it for retraining</i>.”; “Constantly train and improve ML models using the <i>human validated data</i>.”); <i>id.</i> (“Manage – <i>Monitor and manage your AI skills</i> ensuring the highest efficiency”).</p> <p>UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, <i>the robot asks AI for a prediction</i>, supplying any required data from the process. When <i>the prediction is returned, the robot acts on the results</i> and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. <i>You can manage your models and track their progress</i>. You can <i>engage with models and validate predictions</i>, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data</i>, they recognize patterns</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 5	UiPath Accused Products
	<p>and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> (“It’s also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”).</p> <p>For another example, UiPath Attended Robots refines the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query, including seeking input from human users. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”).</p> <p>“[P]eople and robots work together to accomplish a complex task”; alternatively, “robots will work on a task and loop in their human teammates to handle an exception or make a decision.” UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise”, at 2; <i>id.</i> at 4 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 6 (“a specific action you take triggers a robot to start a task”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Document Understanding refines the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query, including by asking the second user for validation. <i>See, e.g.,</i> UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can ask for employee validation if needed and will automatically learn from the human validated data.”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 8 (“Whether your</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 5	UiPath Accused Products
	<p>documents are structured, semi-structured, or unstructured, <i>UiPath Document Understanding can teach robots</i> to read, analyze, and process your documents.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 15 (“Communications mining can be an important component in intelligent document processing (IDP). Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”).</p> <p>UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to <i>six people</i>, whose <i>job is to monitor the bots</i>” and “<i>check to make sure that the data being fetched</i> using document understanding is at par.”); <i>id.</i> at 10 (the <i>human team “monitor[s] the processes”</i>); <i>id.</i> at 13 (Document Understanding has the “ability to extract data from documents for <i>use in downstream workflows</i>” and “extract[s] the data into different types”; “<i>Data extraction can pull data from documents and feed it selectively into integrated systems</i>”); <i>id.</i> at 17 (with Document Understanding, “[p]eople can now delegate paperwork to software robots, <i>while robots still go to humans for validation when it’s needed.</i>”); <i>id.</i> at 13:</p> <div> <pre> graph TD subgraph Documents D1[Document 1] D2[Document 2] D3[Document 3] D4[Document 4] end subgraph Systems SA[System A] SB[System B] SC[System C] SD[System D] end D1 --> DUE[Document Understanding Data Extraction] D2 --> DUE D3 --> DUE D4 --> DUE DUE --> SA DUE --> SB DUE --> SC DUE --> SD </pre> </div> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly refine the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 6	UiPath Accused Products
<p>Claim 6Pre. The method of Claim 1, in which,</p>	<p>All versions and implementations of UiPath products practice the method of Claim 1. <i>See</i> Claim 1.</p>
<p>6A. The plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible.</p>	<p>All versions and implementations of UiPath products practice the method of Claim 1, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible. These data sources can be private data sources, open-source data sources, or proprietary data sources.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining practices the method of Claim 1, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including emails and other communications. <i>See, e.g.</i>, https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) (“[S]o what Communications Mining has done <i>is it’s looked through all of those emails, all of those hundred and thirteen thousand emails, and it’s created a cluster of similar looking emails, right, similar looking emails</i> that all have <i>similar wording.</i>”) (emphasis added); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Our LLM consistently and accurately extracts the most important information from <i>masses of communications</i>, and in a way that’s safe and reliable for the enterprise.”); <i>id.</i> (“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from <i>inbound messages</i>: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time <i>view of all service channels</i>—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>Data sources can be, for example, collections of data, such as email accounts, batches, folders or individual emails, any of which can be a data source in UiPath’s accused products. <i>See, e.g.</i>, UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale <i>large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.</i>’”); <i>id.</i> (“convert <i>business communications like emails</i> into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in <i>these messages</i>, discovering unknown processes, data points and automation opportunities. This is what</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 6	UiPath Accused Products
	<p>communications mining enables, at speed and <i>at scale</i>.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically <i>discover message clusters</i> that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of <i>complex messages, containing multiple different requests</i>. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like <i>emails tickets and chats</i>—are prevalent. It works best when there’s a <i>high volume of messages</i> passing between colleagues, customers, suppliers, and partners. If there’s a business department with <i>a lot of shared mailboxes and systems</i>, it’s a good candidate for communications mining. If those messages come with <i>PDFs or scanned images</i>, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is <i>a large quantity of unstructured data</i>, and people ready to take it through a quick and easy training process.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—<i>specifically communications data like emails, service requests, and support tickets</i>. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p> <p>How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <ol style="list-style-type: none"> 1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. 2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications. 3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. 4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. 5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change. 6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 6	UiPath Accused Products
	<p>For another example, UiPath Process Mining practices the method of Claim 1, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including across different systems. <i>See, e.g.</i>, https://www.uipath.com/rpa/what-is-process-mining (“Every enterprise system—like SAP, Salesforce or Oracle—captures event data related to your processes. Process mining reads this data and transforms it into an event log.”); https://www.uipath.com/platform/discover/process-mining (“Analyze the digital footprint of processes across all systems, including SAP, Salesforce, ServiceNow, Oracle, and custom systems.”); https://www.uipath.com/resources/automation-demo/process-mining-demo (Video at 2:10-2:20) (“As a start, my COE has opted to ingest about 410,000 rows of data from 40,000 purchase orders and as we scale process mining in P2P, my app can handle up to a billion rows of data.”); <i>id.</i> (“UiPath Process Mining reads the data in your line of business systems and applications.”).</p> <p>UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.” UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); <i>id.</i> at 10 (“product ensures a single source of truth by centralizing data and dashboard management”); <i>id.</i> at 11 (UiPath Process Mining was used “to evaluate more than 200,000 items, including purchase orders and invoices”). Data sources can be, for example, these various databases and enterprise systems as well as events logs made up of individual data, any of which can be a data source in UiPath’s accused products.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 6	UiPath Accused Products
	<p>For another example, UiPath Task Mining practices the method of Claim 1, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including across variations of a certain task. <i>See, e.g.,</i> https://www.uipath.com/resources/automation-demo/assisted-task-mining-demo (Video at 3:12) (“Gain a full picture of a task by <i>analyzing the variations and merging them into a comprehensive task map</i>”).</p> <p>UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to practice the method of Claim 1, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite practices the method of Claim 1, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 6	UiPath Accused Products
	<p>publically accessible, including different applications, databases, websites, or data sets. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data <i>from usage data of your software apps.</i>”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data <i>across different test environments.</i> Its capabilities are designed to <i>handle complex and large data sets</i>, enabling scalable and efficient test data management. UiPath also simplifies <i>test data synchronization through integrated solutions</i> (e.g., UiPath Data Service, UiPath Test Data Queues) <i>to ensure consistency of test data across multiple test environments and teams.</i>”); <i>id.</i> at 5 (“UiPath Database Activities <i>allow you to connect to a range of databases</i>, such as SQL Server, Oracle, DB2, and more, <i>either directly or via ODBC/OLEDB.</i> This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering <i>connectors for external applications via the UiPath Integration Service, as well as API activities</i> (e.g., UiPath Web API Activities) <i>and integrations into Postman.</i> This enables testing teams to <i>leverage external web services</i> (e.g., Mockaroo, Azure OpenAI, OpenAI) <i>and custom web services</i> (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically</i> during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources, such as websites and files.</i> These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and <i>link it to an external data source</i> so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by <i>providing integrations with your preferred test data source, whether it’s a database, structured file</i> (e.g., Excel, JSON), <i>or even a flat file.</i> All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments.</i> The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures, such as related and reusable records.</i> These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 6	UiPath Accused Products
	<p>utilizing data-driven testing features of UiPath Studio and <i>integrating with external data sources or using built-in test data management tools</i>, you can efficiently manage data while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath AI Center practices the method of Claim 1, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including different data and document types. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:30) (“AI Center analyzes <i>PDFs, TIFFs, JPEGs, PNGs, JSON, and CSV</i> and <i>every other data type</i> defined by your models”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (“Our pre-built models help robots understand and work with a <i>wide range of document types, including invoices, receipts, purchase orders, utility bills, passports, and contracts.</i>”); UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: <i>Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale.</i> Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 7 (“It’s also important to note that your ML models are best when <i>working with the most relevant data.</i> The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to <i>process structured documents</i>; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Data Service practices the method of Claim 1, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including by combining data sources in order to execute the query. <i>See, e.g.,</i> https://www.uipath.com/product/no-code-data-modeling (“<i>Ditch the data silos</i>, the security concerns, and one-off data schemas. And give developers simple, easy, productive access to the data, variables, and tools they need across the entire UiPath Platform... Integrate easily <i>with any enterprise or legacy system, database, or custom app. Bring that data into a single, scalable, secure place</i> with a drag-and-drop</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 6	UiPath Accused Products
	<p>storage interface. Then make it click-simple to bring trustable, fresh, and consistent information into every automation. Seamlessly access and reuse data across multiple automations”).</p> <p>For another example, UiPath Document Understanding practices the method of Claim 1, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including a variety of different documents, document types, and system of documents. <i>See, e.g.,</i> https://www.uipath.com/product/document-understanding (processes “a wide range of documents”); <i>id.</i> (“Document Understanding framework enabling processing different document types and structures using UiPath Studio”); UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, even when the type or format of the document changes”); <i>id.</i> at 8 (“Whether your documents are structured, semi-structured, or unstructured, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills” and unstructured documents with no fixed format such as “various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to extract document data from these special cases.”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction can pull data from documents and feed it selectively into integrated systems”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 6	UiPath Accused Products
	<div> </div> <p>For another example, UiPath Attended Robots practice the method of Claim 1, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including processes, documents, and applications. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Easily embed automations in <i>each employee’s desktop or web applications</i> with Robot.JS. Use desktop triggers to set up robots that <i>monitor activities</i> behind the scenes and automatically start processes based on user actions.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “<i>log into applications</i>, move files and folders, copy and paste, fill in forms, <i>interact with data, and more</i>”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to <i>comb through your company’s different systems</i> for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms <i>bring in relevant information from a variety of different systems</i>. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly practice the method of Claim 1, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 7	UiPath Accused Products
<p>Claim 7Pre. The method of Claim 1, in which,</p>	<p>All versions and implementations of UiPath products practice the method of Claim 1. <i>See</i> Claim 1.</p>
<p>7A. The query is a natural language query, and Further comprising, translating the query to a system understood language.</p>	<p>All versions and implementations of UiPath products practice the method of Claim 1, in which the query is a natural language query, and further comprising, translating the query to a system understood language, such as a Boolean string.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communication Mining practices the method of Claim 1, in which the query is a natural language query, and further comprising, translating the query to a system understood language, including to look for “similar looking emails” with “similar wording” (as examples). <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) (“[S]o what Communications Mining has done is it’s looked through all of those emails, all of those hundred and thirteen thousand emails, and it’s created a cluster of similar looking emails, right, similar looking emails that all have similar wording.”) (emphasis added); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”).</p> <p>UiPath Communication Mining also practices the method of Claim 1, in which the query is a natural language query, and further comprising, translating the query to a system understood language, including to determine intent, sentiment, and emotion included in communications. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from inbound messages: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> (“The development team is also enhancing the product’s ability to extract intents—like reasons for contact—from messages, and recognize the relationship between multiple intents and key data points like customer numbers, addresses, and dates.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 7	UiPath Accused Products
	<p>create a structured output, where <i>each request is a separate ‘extraction’ containing the intent and all associated data.’</i>); <i>id.</i> at 13:</p> <p>How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p>  <p>1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> <p>2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> <p>3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> <p>4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> <p>5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> <p>6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> <p>For another example, UiPath Process Mining practices the method of Claim 1, in which the query is a natural language query, and further comprising, translating the query to a system understood language, including by adding additional concepts to the initial query. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 7 (uses “existing system data to identify, monitor, and improve business processes” and <i>based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set.</i> The result is then used for process discovery, conformance checking, and process enhancement.”).</p> <p>“In addition, process mining can <i>break down silos of data</i> about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now <i>relate the candidate process to other tasks or processes</i> to create full visibility into end-to-end processes - such as</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 7	UiPath Accused Products
	<p>order management or procurement – that span systems and departments.” UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4.</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to practice the method of Claim 1, in which the query is a natural language query, and further comprising, translating the query to a system understood language. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite practices the method of Claim 1, in which the query is a natural language query, and further comprising, translating the query to a system understood language, including identified or generated test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to <i>generate and identify test data from usage data of your</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 7	UiPath Accused Products
	<p><i>software apps.”); id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 7	UiPath Accused Products
	<p>UiPath products including UiPath's "Build/Automate" features also each perform this element.</p> <p>For example, UiPath Attended Robots practice the method of Claim 1, in which the query is a natural language query, and further comprising, translating the query to a system understood language, including by taking an action that instructs the robot to expand or share information on the query. <i>See, e.g.,</i> UiPath White Paper, "Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise," at 2 (robots "log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more"); at 4 ("Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company's different systems for you to find what you need."); <i>id.</i> at 5 ("the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user."); <i>id.</i> at 6 ("a specific action you take triggers a robot to start a task"); <i>id.</i> at 7 ("Multiple robots work together to complete a complex process by sharing information as they work.").</p> <p>For another example, UiPath AI Center practices the method of Claim 1, in which the query is a natural language query, and further comprising, translating the query to a system understood language, including by processing unstructured or structured data. <i>See, e.g.,</i> UiPath White Paper, "Bringing the Power of AI and RPA Together with AI Center," at 4 ("Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity."); <i>id.</i> at 5 ("AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI."); <i>id.</i> at 6 ("As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business."); <i>id.</i> at 7 ("It's also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency"); <i>id.</i> at</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 7	UiPath Accused Products
	<p>8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. <i>RPA may allow you to process structured documents</i>; adding AI takes the automation even further, <i>making accurate predictions</i> based off automated document processes.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly practices the method of Claim 1, in which the query is a natural language query, and further comprising, translating the query to a system understood language. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 8	UiPath Accused Products
Claim 8 Pre. The method of Claim 1, in which,	All versions and implementations of UiPath products practice the method of Claim 1. <i>See</i> Claim 1.
8A. The plurality of data sources are pre-defined.	<p>All versions and implementations of UiPath products practice the method of Claim 1, in which the plurality of data sources are pre-defined.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining practices the method of Claim 1, in which the plurality of data sources are pre-defined, including emails and other communications. <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) (“[S]o what Communications Mining has done <i>is it’s looked through all of those emails, all of those hundred and thirteen thousand emails,</i> and it’s created a cluster of similar looking emails, right, similar looking emails that all have similar wording.”) (emphasis added); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Our LLM consistently and accurately extracts the most important information from <i>masses of communications</i>, and in a way that’s safe and reliable for the enterprise.”); <i>id.</i> (“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from <i>inbound messages</i>: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> (“UiPath gives businesses a <i>custom-filtered</i>, real-time <i>view of all service channels</i>—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>Data sources can be, for example, collections of data, such as email accounts, batches, folders or individual emails, any of which can be a data source in UiPath’s accused products. <i>See, e.g.,</i> UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale <i>large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.</i>’”); <i>id.</i> (“convert <i>business communications like emails</i> into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in <i>these messages</i>, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and <i>at scale.</i>”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically <i>discover message clusters</i> that reveal repetitive processes, requests and issues. Communications Mining continuously</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

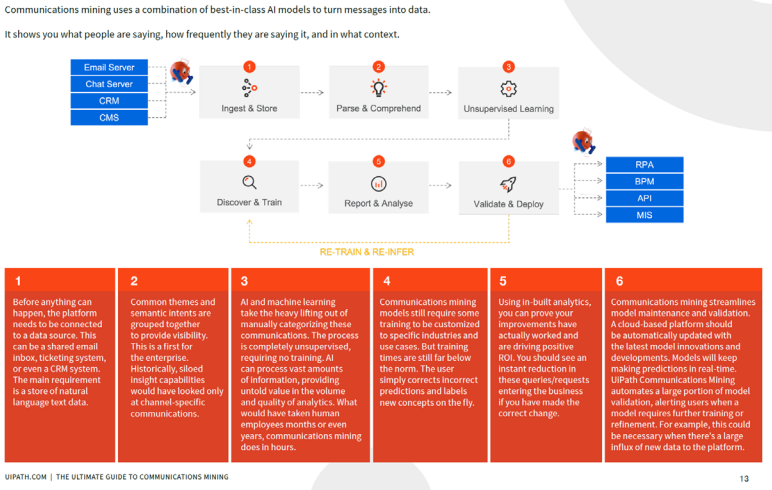
Claim 8	UiPath Accused Products
	<p>retrains to discover new and valuable insights.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p> <p style="text-align: center;">How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p>  <p>1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> <p>2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, sliced insight capabilities would have looked only at channel-specific communications.</p> <p>3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> <p>4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> <p>5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> <p>6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> <p>For another example, UiPath Process Mining practices the method of Claim 1, in which the plurality of data sources are pre-defined, including across different systems. <i>See, e.g.,</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 8	UiPath Accused Products
	<p>https://www.uipath.com/rpa/what-is-process-mining (“<i>Every enterprise system—like SAP, Salesforce or Oracle—captures event data related to your processes. Process mining reads this data and transforms it into an event log.</i>”); https://www.uipath.com/platform/discover/process-mining (“Analyze the digital footprint of <i>processes across all systems, including SAP, Salesforce, ServiceNow, Oracle, and custom systems.</i>”); https://www.uipath.com/resources/automation-demo/process-mining-demo (Video at 2:10-2:20) (“As a start, my COE has opted to ingest about <i>410,000 rows of data from 40,000 purchase orders</i> and as we scale process mining in P2P, my app can handle up to a <i>billion rows of data.</i>”); <i>id.</i> (“UiPath Process Mining reads the data in your line of <i>business systems and applications...</i>”).</p> <p>UiPath Process Mining capabilities “include ... <i>data connections available to multiple and/or different databases</i> ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for <i>controlled access to data</i>. It also allows administrators to establish user roles for <i>broad or very specific functions for groups or individuals.</i>” UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “<i>end-to-end understanding</i> of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “<i>existing system data</i> to identify, monitor, and improve business processes” and <i>based on “event-log data</i>, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by <i>adding other concepts to the minimal initial data set</i>. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to <i>any database</i> and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only <i>end-to-end solution</i> that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most <i>comprehensive process understanding solution.</i>”); <i>id.</i> at 10 (“product ensures a single source of truth by <i>centralizing data and dashboard management</i>”); <i>id.</i> at 11 (UiPath Process Mining was used “to evaluate <i>more than 200,000 items, including purchase orders and invoices</i>”). Data sources can be, for example, these various databases and enterprise systems as well as events logs made up of individual data, any of which can be a data source in UiPath’s accused products.</p> <p>For another example, UiPath Task Mining practices the method of Claim 1, in which the plurality of data sources are pre-defined, including across variations of a certain task. <i>See, e.g.</i>, https://www.uipath.com/resources/automation-demo/assisted-task-mining-demo (Video at 3:12) (“Gain a full picture of a task by <i>analyzing the variations and merging them into a comprehensive task map</i>”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 8	UiPath Accused Products
	<p>UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to practice the method of Claim 1, in which the plurality of data sources are pre-defined. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite practices the method of Claim 1, in which the plurality of data sources are pre-defined, including different applications, databases, websites, or data sets. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 8	UiPath Accused Products
	<p>Data Service, UiPath Test Data Queues) <i>to ensure consistency of test data across multiple test environments and teams.</i>"); <i>id.</i> at 5 ("UiPath Database Activities <i>allow you to connect to a range of databases</i>, such as SQL Server, Oracle, DB2, and more, <i>either directly or via ODBC/OLEDB</i>. This enables you to <i>execute actions within the database</i> such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data."); <i>id.</i> ("UiPath simplifies API-related test data tasks by offering <i>connectors for external applications via the UiPath Integration Service, as well as API activities</i> (e.g., UiPath Web API Activities) <i>and integrations into Postman</i>. This enables testing teams to <i>leverage external web services</i> (e.g., Mockaroo, Azure OpenAI, OpenAI) <i>and custom web services</i> (e.g., REST, SOAP, GraphQL) for either <i>retrieving or generating test data dynamically during automated test</i> execution through low-code automation. One of UiPath's core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources, such as websites and files</i>. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, <i>followed by the execution of test sets to ensure streamlined test execution.</i>"); <i>id.</i> at 6 (UiPath Test Suite can "<i>parameterize your test with data variables and link it to an external data source</i> so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by <i>providing integrations with your preferred test data source, whether it's a database, structured file</i> (e.g., Excel, JSON), <i>or even a flat file</i>. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools <i>offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records</i>. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines."); <i>id.</i> ("By utilizing data-driven testing features of UiPath Studio and <i>integrating with external data sources or using built-in test data management tools</i>, you can efficiently manage data while minimizing redundancy.").</p> <p>UiPath products including UiPath's "Build/Automate" features also each perform this element.</p> <p>For example, UiPath AI Center practices the method of Claim 1, in which the plurality of data sources are pre-defined, including different data and document types. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 8	UiPath Accused Products
	<p>ai-integration-with-ai-center (Video at 1:30) (“AI Center analyzes <i>PDFs, TIFFs, JPEGs, PNGs, JSON, and CSV</i> and <i>every other data type defined by your models</i>”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (“Our pre-built models help robots understand and work with a <i>wide range of document types, including invoices, receipts, purchase orders, utility bills, passports, and contracts.</i>”); UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: <i>Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale.</i> Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 7 (“It’s also important to note that your ML models are best when <i>working with the most relevant data.</i> The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to <i>process structured documents</i>; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Data Service practices the method of Claim 1, in which the plurality of data sources are pre-defined, including by combining data sources in order to execute the query. <i>See, e.g.,</i> https://www.uipath.com/product/no-code-data-modeling (“<i>Ditch the data silos</i>, the security concerns, and one-off data schemas. And give developers simple, easy, productive access to the data, variables, and tools they need across the entire UiPath Platform... Integrate easily <i>with any enterprise or legacy system, database, or custom app. Bring that data into a single, scalable, secure place</i> with a drag-and-drop storage interface. Then make it click-simple to bring trustable, fresh, and consistent information into every automation. Seamlessly access and reuse data across multiple automations”).</p> <p>For another example, UiPath Document Understanding practices the method of Claim 1, in which the plurality of data sources are pre-defined, including a variety of different documents, document types, and system of documents. <i>See, e.g.,</i> https://www.uipath.com/product/document-understanding (processes “a <i>wide range of documents</i>”); <i>id.</i> (“Document Understanding framework enabling processing <i>different document types and structures</i> using UiPath Studio”); UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 8	UiPath Accused Products
	<p>(Document Understanding “automatically determine[s] the location of document data, even when <i>the type or format of the document changes</i>”); <i>id.</i> at 8 (“Whether your <i>documents are structured, semi-structured, or unstructured</i>, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like <i>tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills</i>” and unstructured documents with no fixed format such as “<i>various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts</i>”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can <i>be paired with our rich ecosystem of partners</i> to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to <i>extract document data from these special cases</i>.”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction <i>can pull data from documents</i> and feed it selectively into integrated systems”); <i>id.</i> at 13:</p> <div> </div> <p>For another example, UiPath Attended Robots practices the method of Claim 1, in which the plurality of data sources are pre-defined, including processes, documents, and applications. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Easily embed automations in <i>each employee’s desktop or web applications</i> with Robot.JS. Use desktop triggers to set up robots that <i>monitor activities</i> behind the scenes and automatically start processes based on user actions.”); UiPath White Paper,</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 8	UiPath Accused Products
	<p>“Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly practice the method of Claim 1, in which the plurality of data sources are pre-defined. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 9	UiPath Accused Products
Claim 9 Pre. The method of Claim 1, in which,	All versions and implementations of UiPath products practice the method of Claim 1. <i>See</i> Claim 1.
9A. The monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source.	<p>All versions and implementations of UiPath products practice the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source. The monitoring may be performed by data extractors that monitor changes to a data source in real-time. When information at the data sources is updated or located to match the query terms, a data extractor extracts the data to be analyzed.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining practices the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including real-time monitoring or analysis of emails or other communications. <i>See, e.g.</i>, UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (“convert business communications like emails into structured, machine-readable data. This data is then used <i>for real-time analysis</i> and automation.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a <i>custom-filtered, real-time view of all service channels—extracting the information they care about most</i>. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. <i>Custom, real-time alerts enable teams to respond to breaking issues</i> in an agile way.”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 9	UiPath Accused Products
	<div><h2>How does communications mining work?</h2><p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p><div><div><p>1</p><p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p></div><div><p>2</p><p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p></div><div><p>3</p><p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p></div><div><p>4</p><p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p></div><div><p>5</p><p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p></div><div><p>6</p><p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p></div></div><p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p><p>13</p></div>

See also <https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining> (same; “UiPath gives businesses” this ability, “driving continuous improvement”; explaining how to “[m]onitor your communication”).

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 9	UiPath Accused Products
	<div> <p>The screenshot shows a web browser window titled 'Scale your Automations with UiPath Communications Mining'. On the left, there is a video call interface with two participants: Anders Jensen (Twitter: andersjensen) and Joe Prosser (Twitter: @JoeProsser). The main area of the browser displays a flowchart titled 'Communications Mining Queue Feeder'. The flowchart starts with a 'Start' node, followed by a 'Read batch of Communications from a Queue' node. A decision diamond asks 'Unread emails?'. If 'yes', it goes to 'Add them to Orchestrator queue', then 'Mark batch of emails as read', and loops back to 'Read batch of Communications from a Queue'. If 'no', it goes to a 'Stop' node.</p> <pre> graph TD Start((Start)) --> Read[Read batch of Communications from a Queue] Read --> Unread{Unread emails?} Unread -- yes --> Add[Add them to Orchestrator queue] Add --> Mark[Mark batch of emails as read] Mark --> Read Unread -- no --> Stop((Stop)) </pre> </div> <p>https://www.youtube.com/watch?v=Qayl7M8u5AQ</p> <p>For another example, UiPath Process Mining practices the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including the continuous monitoring of processes to gain “real time insight”. See, e.g., https://www.uipath.com/product/process-mining (“Continuous monitoring: Continuously adapt to changing conditions with complete and real time insight into how processes are executed and KPI impact.”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining benefits [...] Continuously monitor processes and measure improvements”); <i>id.</i> (“So you’ll have the facts you need to understand, improve, and monitor how things get done... anywhere they’re getting done.”); <i>id.</i> (“Continuously monitors automation performance and ROI”); https://www.uipath.com/platform/discover/process-mining (“Monitor KPIs via dashboards that track processes such as purchase-to-pay, order-to-cash, incident management, and others.”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 9	UiPath Accused Products
	<p>process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that <i>tightly integrates process understanding and monitoring with the ability to act on insights with automation</i>. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to practice the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>For another example, UiPath Automation Hub practices the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, through integration with other UiPath “Discover” features. <i>See, e.g.</i>, https://www.uipath.com/product/automation-hub (“Crowdsource</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 9	UiPath Accused Products
	<p>automation ideas or use Process Mining, Task Mining, and Communications Mining for data-driven discovery. Track everything from idea to production in one place—with visibility and control.”).</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Orchestrator practices the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including output of UiPath robots. <i>See, e.g., https://www.uipath.com/product/orchestrator</i> (“Orchestrator <i>tracks and logs everything every robot does, along with everything people do with robots</i>, so you can keep compliant and secure. Drill-down dashboards and UiPath Insights give you full visibility from deployment to ROI.”).</p> <p>For another example, UiPath Test Suite practices the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including by identifying and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and <i>identify test data</i> from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient <i>test data management</i>. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to <i>execute actions within the database</i> such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”)</p> <p>“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically</i> during automated test execution through low-code automation.” <i>Id.</i>; <i>id.</i> (“One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources</i>, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 9	UiPath Accused Products
	<p>automated test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly manage test data</i> tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can <i>efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Action Center practices the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including the monitoring of processes. <i>See, e.g.</i>, UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf (“Benefits of Using Action Center... <i>Monitor and manage processes from a portal.</i>”).</p> <p>For another example, UiPath AI Center practices the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including monitoring information and processes in order to act on the data. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“Continuously improve your models by bringing humans to handle exceptions, <i>validate data and send it for retraining.</i>”); <i>id.</i> (“<i>Constantly train and improve ML models using the human validated data.</i>”); <i>id.</i> (“Manage – <i>Monitor and manage your AI skills</i> ensuring the highest efficiency”); UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 9	UiPath Accused Products
	<p>significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Attended Robots practice the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including the monitoring of processes and information in real-time. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Use desktop triggers to set up robots that monitor activities behind the scenes and automatically start processes based on user actions.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 9	UiPath Accused Products
	<p>For another example, UiPath Document Understanding practices the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including monitoring variable parts of documents. <i>See, e.g.</i>, UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, <i>even when the type or format of the document changes</i>”); <i>id.</i> at 6 (“Document data is <i>exported for further use</i> in various systems according to your business needs.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to six people, whose <i>job is to monitor the bots</i>” and “check to make sure that the <i>data being fetched using document understanding is at par.</i>”); <i>id.</i> at 10 (the human team “<i>monitor[s] the processes</i>”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly practice the method of Claim 1, in which the monitoring comprises deploying extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source. This element is in part “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
<p>Claim 10Pre. An apparatus configured to analyze data, the apparatus comprising: a memory unit; and at least one processor coupled to the memory unit, in which the at least one processor is configured:</p>	<p>Plaintiff Rule 14, LLC (“Rule 14” or “Plaintiff”) accuses all versions and implementations of UiPath’s products of being an apparatus configured to analyze data, the apparatus comprising a memory unit and at least one processor coupled to the memory unit, in which the at least one processor is configured to perform one or more elements of the ’977 Patent, including UiPath products that host, integrate, manage, work with, or affect the functionality of other UiPath products. <i>See</i> Claim 1.</p> <p>As an initial matter, all UiPath products (including Automation Cloud, Automation Suite, Solutions Management, Customer Portal, and Standalone) include a memory unit and at least one processor coupled to the memory unit. <i>See, e.g.,</i> https://docs.uipath.com/automation-cloud/automation-cloud/latest/admin-guide/data-residency-cloud (“Automation Cloud services are available in multiple locations worldwide, dispersed across various global regions to offer coverage to our customers around the world.”).</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining analyzes data, including emails and other communications. <i>See, e.g.,</i> https://www.uipath.com/product/communications-mining (“From sending an email to responding to a customer request, every business conversation matters. But processing these communications has always been manual, costly, and inefficient. Until now.”); <i>id.</i> (“UiPath Communications Mining turns every message into actionable data, in real time and on any communications channel.”); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining is a new capability to understand and automate business communications. It uses state-of-the-art AI models to turn business messages—from emails to tickets—into actionable data. It does this in real time and on all major business communications channels.”); <i>id.</i> (“Communications Mining gives businesses insight into previously hidden processes and channels.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.’”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels— extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications— like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 15 (“Communications mining can be an important component in intelligent document processing (IDP). Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<div> <h2>How does communications mining work?</h2> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <div> <div> <p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> </div> <div> <p>2</p> <p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> </div> <div> <p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> </div> <div> <p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> </div> <div> <p>5</p> <p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> </div> <div> <p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> </div> <p>UiPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p> </div> <p>For another example, UiPath Process Mining analyzes data, including business applications data to understand end-to-end processes. <i>See, e.g.</i>, https://www.uipath.com/product/process-mining (“Use the data from your business applications to give you a detailed understanding of complex business processes. You’ll know what to automate, how to improve your processes – and be able to prove impact, too.”); <i>id.</i> (“Process Mining - analyze data from business applications to understand end-to-end processes”); https://www.uipath.com/blog/industry-solutions/how-process-mining-helps-banks-evolve (“Process mining objectively discovers processes. The technology analyzes processes in a very detailed way, providing specific observations and insights for improvement.”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining connects to source systems for a continuous view into how business processes are executed.”); https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“Process mining is a powerful technology that can help businesses gain visibility into their processes. It does this by tracing the digital footprints left behind in systems and applications. Process mining then transforms that raw data into intuitive visualizations of process flows. It makes those complex and wide-ranging processes, like procure-to-pay (P2P) and order-to-cash (O2C), tangible. With thorough and fact-based visualizations, you can spot process bottlenecks, inefficiencies, and risks, at a glance.”); UiPath White Paper, “Accelerating RPA with End-to-End Process</p>

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Claim 10	UiPath Accused Products
	<p>Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); <i>id.</i> at 10 (“product ensures a single source of truth by centralizing data and dashboard management”); <i>id.</i> at 11 (UiPath Process Mining was used “to evaluate more than 200,000 items, including purchase orders and invoices”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4 (“In addition, process mining can break down silos of data about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now relate the candidate process to other tasks or processes to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.”); <i>id.</i> at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”).</p> <p>For another example, UiPath Task Mining analyzes data, including data regarding employees’ desktop activities to determine improvement opportunities. <i>See, e.g.,</i> https://www.uipath.com/product/task-mining (“Get an objective data-driven picture of as-is processes, quicker and with fewer resources involved.”); <i>id.</i> at Video (analyzing daily task of employees to scale up automations; “the first stage is all about</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>collecting” – automatically collecting and upload data from employees’ computers and then analyzing those findings “by exporting findings into UiPath Studio or as a detailed “Process Definition” document”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”); UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 2 (task mining “can capture user actions and metadata, such as keystrokes, mouse clicks, activity screenshots, and other potential system-level activities, performed together on multiple desktops to discover tasks and provide insights into the tasks and activities involved in executing a process. The technology provides a data-based approach to process optimization and automation through different applications and use cases spanning different industries and process areas.”); <i>id.</i> at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining).</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Orchestrator analyzes data, including as the centralized hub to deploy, manage, and govern all the UiPath Robots, both attended and unattended, which function to analyze data by teaching robots new AI skills, including reading documents, recognizing dynamic interfaces and understanding conversations to make complex decisions. https://docs.uipath.com/orchestrator/standalone/2023.4/user-guide/about-robots. See, e.g., https://www.uipath.com/product/orchestrator (“Orchestrator tracks and logs everything every robot does, along with everything people do with robots, so you can keep compliant and secure.”); https://www.uipath.com/product/attended-automation (“Use desktop triggers to set up robots</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>that monitor activities behind the scenes and automatically start processes based on user actions.”); <i>id.</i> (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 2 (“people and robots work together to accomplish a complex task” or “robots will work on a task and loop in their human teammates to handle an exception or make a decision”; “people and robots work together and share a computer and its resources”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 6 (“a specific action you take triggers a robot to start a task”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Insights analyzes data, including by enabling businesses to track, measure, and manage performance of an automation program. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-insights (“UiPath Insights is an RPA analytics solution that enables your business to track, measure, and manage the performance of your entire automation program—so you can scale your automation journey to the next level.”); <i>id.</i> (“Visualize automation complexity, estimated costs, and benefits of your projects with the Automation Hub integration. Compare estimated vs actual ROI of automation ideas.”); <i>id.</i> (“Measure and report on the performance of document-processing automations with an integration with Document Understanding”); <i>id.</i> (“Situational awareness of your RPA operations is critical to being able to measure and analyze everything from Robot and process performance, to transactions and exceptions. Start with the Robots, Queues, and Processes dashboards to get deeper visibility into your RPA operations.”); <i>id.</i> (“Track and measure automation performance[:]. Start out with a library of customizable pre-built dashboard templates to track your robots, queues, and processes. With self-serve analytics, you and your team can measure and forecast the performance of each robot to make informed decisions that reduce errors, maximize usage, and improve efficiency.”).</p> <p>For another example, UiPath Test Suite analyzes data, including test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to</p>

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	<p>automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p>

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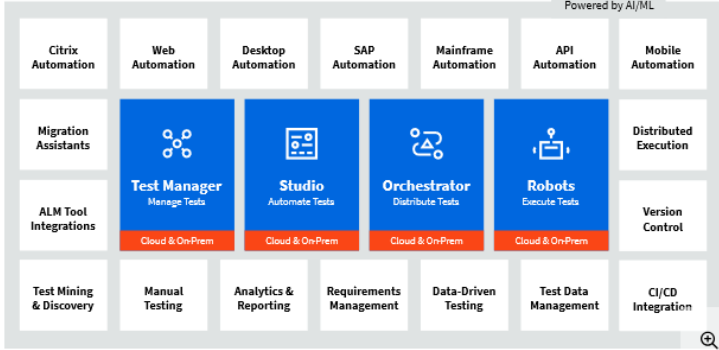
Claim 10	UiPath Accused Products
	<p>See also https://docs.uipath.com/test-suite/automation-suite/2023.10/user-guide/introduction-test-suite:</p> <p>In addition, think of UiPath Test Suite as a solution, a suite of 4 tools:</p>  <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath Action Center analyzes data, including by integrating other UiPath products. <i>See, e.g.</i>, UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf (“Action Center gives you management tools to monitor processes from start to finish, identify, and resolve resource bottlenecks.”); https://docs.uipath.com/action-center/automation-cloud/latest/user-guide/introduction (“Action Center offers business users a way to handle actionable items, and provide business inputs to Robots”).</p> <p>For another example, UiPath AI Center analyzes data, including by deploying, consuming, managing, and improving machine learning models. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, manage, and improve machine learning models.”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:03) (“AI Center has machine learning (ML) automations, including document processing, object detection, text classification, sentiment analysis, entity recognition, anomaly detection, demand forecasting, and more”); https://docs.uipath.com/ai-center/automation-cloud/latest/user-guide/about-ai-center (“AI Center is the</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>infrastructure on top of which UiPath Document Understanding machine learning models run.”). As a particular example, UiPath AI Center uses UiPath Document Understanding to extract, interpret, and process data, from PDFs, images, handwriting, and scans. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> at 7 (“It’s also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Document Understanding analyzes data, including extracting and processing data from documents of many types. <i>See, e.g.</i>, UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 7 (“The artificial intelligence and document understanding features are very good and have been helpful when it comes to processing handwritten or unstructured [data],</p>

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	<p>especially when there is a high volume and it is repetitive.”); <i>id.</i> at 8 (Document Understanding is “able to read handwriting with 90% to 95% accuracy.”); <i>id.</i> at 11 (“processing the PDF version of an invoice” involves “the capability to scan an invoice and then pick out the required fields, such as the name of the vendor, the details of the products being sent, or the cost of the product”); <i>id.</i> at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction can pull data from documents and feed it selectively into integrated systems”); <i>id.</i> at 15 (Document Understanding has the ability to extract data “in different formats” including native PDFs, scanned PDFs, handwritten invoices or pictures); UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, even when the type or format of the document changes”); <i>id.</i> at 5 (“They can ask for employee validation if needed and will automatically learn from the human validated data.”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> at 6 (“Document data is exported for further use in various systems according to your business needs.”); <i>id.</i> at 7 (“UiPath Document Understanding can use either a rule-based or a model-based approach, or those can be combined into a hybrid approach.”); <i>id.</i> (“A minimum confidence threshold is set for each document or field to define which extractor is optimal for a specific part.”); <i>id.</i> at 8 (“Whether your documents are structured, semi-structured, or unstructured, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills” and unstructured documents with no fixed format such as “various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to extract document data from these special cases.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products are an apparatus configured to analyze data, the apparatus comprising a memory unit and at least one processor coupled to the memory unit, in which the at least one processor is configured to perform one or more elements of the '977 Patent.</p>

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<p>10A. To generate, via a first user, a query based at least in part on a topic of interest;</p>	<p>All versions and implementations of UiPath products generate, via a first user, a query based at least in part on a topic of interest. This query may be a natural language query manually generated by a human user or generated from a query generator which may, for example, be based on a robot or AI. <i>See</i> Claim 1A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communication Mining generates a query, via a first user, based at least in part on a topic of interest, including from the user, including, for example, generating a query based on taxonomies, labels wording, filters, or ads. <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 34:49-56) (“[S]o the first thing Communications Mining is telling me is can you upload <i>a taxonomy</i>, right? Can you upload <i>a predefined list of labels that you want to look for . . .</i>”); <i>id.</i> at 35:15-35:21 (“[S]o what Communications Mining has done is it’s looked through all of those emails, all of those hundred and thirteen thousand emails, and it’s created a cluster of <i>similar looking emails</i>, right, <i>similar looking emails that all have similar wording.</i>”).</p> <p>“UiPath gives businesses a <i>custom-filtered</i>, real-time view of all service channels—extracting the information <i>they care about most</i>. Built-in analytics allow process owners to <i>track trends and measure service quality and performance at all levels</i>. <i>Custom real-time alerts</i> enable teams to respond to breaking issues in an agile way, driving continuous improvement.”</p> <p>“UiPath Communications Mining turns business conversations into actionable insights. It extracts <i>the most important data</i> from inbound messages: <i>intentions, reasons for contact, sentiment, and emotion</i>. Communications Mining gives businesses insight into previously hidden processes and channels.” https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining.</p> <p><i>See also</i> UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is “a new form of enterprise software able to ‘<i>sift and analyze</i>’ at scale large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.”); <i>id.</i> (“<i>convert business communications</i> like emails into structured, machine-readable data. This data is then used for <i>real-time analysis</i> and automation.”); <i>id.</i> at 5 (“Imagine being able to <i>mine the useful information</i> in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of <i>a specially-trained large language model</i>, to automatically</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications monitoring gives managers a custom-filtered, real-time view of all service channels– extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 15 (“Communications mining can be an important component in intelligent document processing (IDP). Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p> <div> <h3>How does communications mining work?</h3> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <ol style="list-style-type: none"> 1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. 2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, allied insight capabilities would have looked only at channel-specific communications. 3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. 4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. 5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change. 6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>For another example, UiPath Process Mining generates a query, via a first user, based at least in part on a topic of interest, including by giving “quick insight” into specific process metrics as chosen by the first user or generating a query based on taxonomies, labels wording, filters, or ads. <i>See, e.g.</i>, https://www.uipath.com/resources/automation-demo/process-mining-demo (Video at 1:58+); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”); https://www.uipath.com/product/process-mining (“<i>Use the data from your business applications</i> to give you a detailed understanding of complex business processes. You’ll know what to automate, how to improve your processes – and be able to prove impact, too.”); <i>id.</i> (“Process Mining - <i>analyze data from business applications</i> to understand end-to-end processes”); <i>id.</i> (“<i>Use KPIs</i> to measure the impact automation has on end-to-end processes.”); https://www.uipath.com/blog/industry-solutions/how-process-mining-helps-banks-evolve (“Process mining <i>objectively discovers processes</i>. The technology analyzes processes in a very detailed way, providing specific observations and insights for improvement.”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining <i>connects to source systems</i> for a continuous view into how business processes are executed.”).</p> <p>“Process mining is a powerful technology that can help businesses gain visibility into their processes. It does this by <i>tracing the digital footprints left behind in systems and applications</i>. Process mining then <i>transforms that raw data</i> into intuitive visualizations of process flows. It makes those complex and wide-ranging processes, like procure-to-pay (P2P) and order-to-cash (O2C), tangible. With thorough and fact-based visualizations, you can spot process bottlenecks, inefficiencies, and risks, at a glance.” https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes</p> <p><i>See also</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (<i>uses “existing system data</i> to identify, monitor, and improve business processes” and <i>based on “event-log data</i>, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the <i>minimal initial data set</i>. The <i>result is then used for process discovery</i>, conformance checking, and process enhancement.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4 (“In addition, process mining can <i>break down silos of data</i> about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>and workflows. You can now <i>relate the candidate process to other tasks or processes</i> to create full visibility into end-to-end processes – such as order management or procurement – that span systems and departments.”).</p> <p>For another example, UiPath Task Mining generates a query, via a first user, based at least in part on a topic of interest, including by capturing specific activities based on a specified task. <i>See, e.g.,</i> https://www.uipath.com/product/task-mining at Video (UiPath Task Mining involves “[a]nalyzing daily tasks of all the employees”, where <i>the “first stage” is about collecting or “automatically capturing” data</i> about tasks or activities; finally, analyzing those findings “by exporting findings into UiPath Studio or as a detailed “Process Definition” document”); UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface <i>for users to ask/input queries</i> and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining, including “Task discovery and analysis,” such as “Define the to-be process model” and “Ability to allow users to create custom KPIs”); <i>id.</i> at 10 (listing strengths of UiPath Task Mining).</p> <p>UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to generate a query, via a first user, based at least in part on a topic of interest. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>UiPath products including UiPath's "Manage/Operate" features also each perform this element.</p> <p>For example, UiPath Test Suite generates a query, via a first user, based at least in part on a topic of interest, including test data generated and identified from usage data. UiPath White Paper, "UiPath Test Suite – Test Data Management," at 3 ("To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps."); <i>id.</i> ("UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams."); <i>id.</i> at 5 ("UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data."); <i>id.</i> ("UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath's core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution."); <i>id.</i> at 6 (UiPath Test Suite can "parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it's a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Attended Robots generate, via a first user, a query based at least in part on a topic of interest, including by beginning an action based on information supplied by a user or other robot. <i>See, e.g.</i>, UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 6 (“a specific action you take triggers a robot to start a task”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath AI Center generates, via a first user, a query based at least in part on a topic of interest, including by recognizing or predicting patterns in documents and seeking validation of said recognition or prediction. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can <i>manage your models</i> and track their progress. You can <i>engage with models and validate predictions</i>, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, <i>they recognize patterns</i> and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“<i>Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining</i>. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to <i>process structured documents</i>; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly generate, via a first user, a query based at least in part on a topic of interest. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p> <p>Rule 14 contends that this limitation is met literally. In the alternative, if not met literally (for example, if a first user is not a human person but instead a computer, AI query generator, or UiPath robot, and that is found not to infringe literally), UiPath accused products also satisfy this limitation under the doctrine of equivalents. Specifically, generating a query via a first user that is a computer, AI query generator, UiPath robot, or similar, performs substantially the same function as generating the query via a first human user (generation of query based on a topic of interest as determined by user regardless of type), in substantially the same way (via generating the query based on topic of interest or rules relevant to a topic of interest), to yield substantially the same result (completing the steps following query generation as outlined by the claim language) as the narrowed claim limitation.</p>
<p>10B. To expand search terms of the query;</p>	<p>All versions and implementations of UiPath products expand search terms of the query, for example, based on natural language expansion and/or processing, search lexicons, expanding the search using misspellings, and/or derivations of the topic of interest/sub-topics. The lexicon may, for example, be generated based on user input, automatic word association, synonym/antonym trees, and/or lexicons of positive/negative modifiers. This expansion may be performed by a user and/or may be automated. <i>See</i> Claim 1B.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>In particular, as illustrative examples, UiPath products including UiPath's "Discover" features each perform this element.</p> <p>For example, UiPath Communication Mining expands search terms of the query, including to look for "similar looking emails" with "similar wording" (as examples). <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) ("[S]o what Communications Mining has done is it's looked through all of those emails, all of those hundred and thirteen thousand emails, and it's created a cluster of similar looking emails, right, similar looking emails that all have similar wording.") (emphasis added); UiPath White Paper, "The Ultimate Guide to Communications Mining," at 5 ("Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale."); <i>id.</i> at 7 ("UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.").</p> <p>UiPath Communication Mining also expands search terms of the query, including to determine intent, sentiment, and emotion included in communications. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining ("UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from inbound messages: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels."); <i>id.</i> ("The development team is also enhancing the product's ability to extract intents—like reasons for contact—from messages, and recognize the relationship between multiple intents and key data points like customer numbers, addresses, and dates."); UiPath White Paper, "The Ultimate Guide to Communications Mining," at 9 ("UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate 'extraction' containing the intent and all associated data."); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p>  <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p> <p>13</p> <p>For another example, UiPath Process Mining expands search terms of the query, including by adding additional concepts to the initial query. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. <i>Analysis can be enhanced by adding other concepts to the minimal initial data set.</i> The result is then used for process discovery, conformance checking, and process enhancement.”).</p> <p>“In addition, process mining can <i>break down silos of data</i> about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now <i>relate the candidate process to other tasks or processes</i> to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.” UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4.</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to expand search terms of the query. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”;</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>“Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite expands search terms of the query, including by retrieving or generating test data dynamically. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 5 (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p><i>test execution.</i>”); <i>id.</i> (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> at 6 (UiPath Test Suite can “<i>parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations.</i> UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments.</i> The tools offer a centralized, secure, and scalable environment to <i>define custom data models and manage complex data structures, such as related and reusable records.</i> These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath Attended Robots expands search terms of the query, including by taking an action that instructs the robot to expand or share information on the query. <i>See, e.g.,</i> UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker <i>to comb through your company’s different systems</i> for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms <i>bring in relevant information from a variety of different systems.</i> They also allow the user to <i>take action on that information</i> by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>For another example, UiPath AI Center expands search terms of the query, including by obtaining a prediction related to the query. <i>See, e.g.,</i> UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, <i>the robot asks AI for a prediction,</i> supplying any required data from the process. <i>When the prediction is returned, the robot acts on the results</i> and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 4 (“Process unstructured data: Information like</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. <i>Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample.</i> But when enhanced with AI, <i>robots can learn to recognize patterns</i> in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 6 (“As your ML models are trained on data, they <i>recognize patterns and make predictions</i>. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, <i>making accurate predictions</i> based off automated document processes.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly expand search terms of the query as explained above—for example, based on search lexicons, expanding the search using misspellings, and/or derivations of the topic of interest/sub-topics. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>10C. To execute the query on a plurality of data sources;</p>	<p>All versions and implementations of UiPath products execute the query on a plurality of data sources. These data sources can be private data sources, open-source data sources, or proprietary data sources. The execution of the query may be done on all available data sources or a subset of data sources. <i>See</i> Claim 1C.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining executes the query on a plurality of data sources, including emails and other communications. <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) (“[S]o what Communications Mining has done <i>is it’s looked through all of those emails, all of those hundred and thirteen thousand emails, and it’s created a cluster of similar looking emails, right, similar looking emails</i> that all have <i>similar wording</i>.”) (emphasis added); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Our LLM consistently and accurately extracts the most important information from <i>masses of communications</i>, and in a way that’s safe and reliable for the enterprise.”); <i>id.</i> (“UiPath Communications</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>Mining turns business conversations into actionable insights. It extracts the most important data from <i>inbound messages</i>: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time <i>view of all service channels</i>—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>Data sources can be, for example, collections of data, such as email accounts, batches, folders or individual emails, any of which can be a data source in UiPath’s accused products. <i>See, e.g.</i>, UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale <i>large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds</i>.”); <i>id.</i> (“convert <i>business communications like emails</i> into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and <i>at scale</i>.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically <i>discover message clusters</i> that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of <i>complex messages, containing multiple different requests</i>. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like <i>emails tickets and chats</i>—are prevalent. It works best when there’s a <i>high volume of messages</i> passing between colleagues, customers, suppliers, and partners. If there’s a business department with <i>a lot of shared mailboxes and systems</i>, it’s a good candidate for communications mining. If those messages come with <i>PDFs or scanned images</i>, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is <i>a large quantity of unstructured data</i>, and people ready to take it through a quick and easy training process.”); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—<i>specifically communications data like emails, service requests, and support tickets</i>. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p>

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	<div> <h2>How does communications mining work?</h2> </div> <div> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <div> <div> <p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> </div> <div> <p>2</p> <p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> </div> <div> <p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> </div> <div> <p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> </div> <div> <p>5</p> <p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> </div> <div> <p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> </div> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div> <p>For another example, UiPath Process Mining executes the query on a plurality of data sources, including across different systems. <i>See, e.g.</i>, https://www.uipath.com/rpa/what-is-process-mining (“Every enterprise system—like SAP, Salesforce or Oracle—captures event data related to your processes. Process mining reads this data and transforms it into an event log.”); https://www.uipath.com/platform/discover/process-mining (“Analyze the digital footprint of processes across all systems, including SAP, Salesforce, ServiceNow, Oracle, and custom systems.”); https://www.uipath.com/resources/automation-demo/process-mining-demo (Video at 2:10-2:20) (“As a start, my COE has opted to ingest about 410,000 rows of data from 40,000 purchase orders and as we scale process mining in P2P, my app can handle up to a billion rows of data.”); <i>id.</i> (“UiPath Process Mining reads the data in your line of business systems and applications...”).</p> <p>UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.” UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to</p>

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Claim 10	UiPath Accused Products
	<p>identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”); “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); <i>id.</i> at 10 (“product ensures a single source of truth by centralizing data and dashboard management”); <i>id.</i> at 11 (UiPath Process Mining was used “to evaluate more than 200,000 items, including purchase orders and invoices”). Data sources can be, for example, these various databases and enterprise systems as well as events logs made up of individual data, any of which can be a data source in UiPath’s accused products.</p> <p>For another example, UiPath Task Mining executes the query on a plurality of data sources, including across variations of a certain task. <i>See, e.g.,</i> https://www.uipath.com/resources/automation-demo/assisted-task-mining-demo (Video at 3:12) (“Gain a full picture of a task by analyzing the variations and merging them into a comprehensive task map”). UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to execute the query on a plurality of data sources. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”); “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in</p>

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	<p>the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite executes the query on a plurality of data sources, including different applications, databases, websites, or data sets. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by <i>providing integrations with your preferred test data source, whether it's a database, structured file</i> (e.g., Excel, JSON), <i>or even a flat file</i>. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures, such as related and reusable records</i>. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and <i>integrating with external data sources or using built-in test data management tools</i>, you can efficiently manage data while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath AI Center executes the query on a plurality of data sources, including different data and document types. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:30) (“AI Center analyzes PDFs, TIFFs, JPEGs, PNGs, JSON, and CSV and <i>every other data type</i> defined by your models”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (“Our pre-built models help robots understand and work with a <i>wide range of document types, including invoices, receipts, purchase orders, utility bills, passports, and contracts.</i>”); UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: <i>Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale.</i> Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”).</p> <p>For another example, UiPath Data Service executes the query on a plurality of data sources, including by combining data sources in order to execute the query. <i>See, e.g.,</i> https://www.uipath.com/product/no-code-data-modeling (“<i>Ditch the data silos</i>, the security concerns, and one-off data schemas. And give developers simple, easy, productive access to the data, variables, and tools they need across the entire UiPath Platform... Integrate easily with any enterprise or legacy system, database, or custom app. <i>Bring that data into a single, scalable, secure place</i> with a drag-and-drop storage interface. Then make it click-</p>

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	<p>simple to bring trustable, fresh, and consistent information into every automation. Seamlessly access and reuse data across multiple automations”).</p> <p>For another example, UiPath Document Understanding executes the query on a plurality of data sources, including a variety of different documents, document types, and system of documents. <i>See, e.g.,</i> https://www.uipath.com/product/document-understanding (processes “a <i>wide range of documents</i>”); <i>id.</i> (“Document Understanding framework enabling processing <i>different document types and structures</i> using UiPath Studio”); UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, even when <i>the type or format of the document changes</i>”); <i>id.</i> at 8 (“Whether your <i>documents are structured, semi-structured, or unstructured</i>, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like <i>tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills</i>” and unstructured documents with no fixed format such as “<i>various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts</i>”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to <i>extract document data from these special cases.</i>”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction <i>can pull data from documents</i> and feed it selectively into integrated systems”); <i>id.</i> at 13:</p>

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Claim 10	UiPath Accused Products
	<div> <p>The diagram illustrates a data processing workflow. On the left, four document icons (each with a colored header: teal, pink, purple, and orange) represent input data sources. A yellow arrow points from these documents to a central teal box labeled 'Document Understanding Data Extraction'. From this central box, four yellow arrows point to four separate system boxes: 'System A' (teal) and 'System B' (pink) at the top, and 'System C' (orange) and 'System D' (purple) at the bottom.</p> </div> <p>For another example, UiPath Attended Robots executes the query on a plurality of data sources, including processes, documents, and applications. <i>See, e.g., https://www.uipath.com/product/attended-automation</i> (“Easily embed automations in <i>each employee’s desktop or web applications</i> with Robot.JS. Use desktop triggers to set up robots that <i>monitor activities</i> behind the scenes and automatically start processes based on user actions.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “<i>log into applications</i>, move files and folders, copy and paste, fill in forms, <i>interact with data, and more</i>”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to <i>comb through your company’s different systems</i> for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms <i>bring in relevant information from a variety of different systems</i>. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly execute the query on a plurality of data sources. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>10D. To select at least one data source from the plurality of data sources, the at least one data source being selected when results</p>	<p>All versions and implementations of UiPath products select at least one data source from the plurality of data sources, for example the data sources disclosed above, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, for example any measurable threshold such as confidence thresholds. <i>See</i> Claim 1D.</p>

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<p>of the query are greater than or equal to an accuracy thresholds;</p>	<p>In particular, as illustrative examples, UiPath products including UiPath's "Discover" features each perform this element.</p> <p>For example, UiPath Communication Mining selects at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by selecting a data source with information that is considered "most relevant" to the query. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining ("UiPath gives businesses a custom-filtered, <i>real-time view of all service channels—extracting the information they care about most</i>. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.").</p> <p>UiPath White Paper, "The Ultimate Guide to Communications Mining," at 5 ("Imagine being able to <i>mine the useful information</i> in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale."); <i>id.</i> at 7 ("UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically <i>discover message clusters</i> that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights."); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining ("UiPath Communications Mining turns business conversations into actionable insights. It <i>extracts the most important data</i> from inbound messages: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels."); <i>id.</i> at 13:</p>

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	<div><h3>How does communications mining work?</h3><p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p><p>1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p><p>2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p><p>3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p><p>4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p><p>5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p><p>6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p><p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p></div> <div><h3>Selecting label confidence thresholds</h3><h4>Introduction</h4><p>The platform is typically used in one of the first steps of an automated process: ingesting, interpreting and structuring an inbound communication, such as a customer email, much like a human would do when that email arrived in their inbox.</p><p>When the platform predicts which labels (or tags) apply to a communication, it assigns each prediction a confidence score (%) to show how confident it is that the label applies.</p><p>If these predictions are to be used to automatically classify the communication, however, there needs to be a binary decision - i.e. does this label apply or not? This is where confidence thresholds come in.</p><p>A confidence threshold is the confidence score (%) at or above which an RPA bot or other automation service will take the prediction from the platform as a binary 'Yes, this label does apply' and below which it will take the prediction as a binary 'No, this label does not apply'.</p></div> <p>https://support.reinfer.io/support/solutions/articles/48001157667-selecting-label-confidence-thresholds</p>

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Claim 10	UiPath Accused Products
	<div><div><div><div><div><div>Filters</div><div><div>Add a new filter</div><div></div></div></div><div><div>Create a stream</div><div><div>Title</div><div>Example</div><div>API Name*</div><div>example</div><div>Description</div><div>Example</div><div>Model version</div><div>R2</div></div><div><div>Filters</div><div>Enter dataset</div></div></div></div><div><div>Labels</div><div><div>Search labels</div><div>All</div><div><div>BillingRefund</div><div>63.2%</div></div><div><div>ChewedTongue</div><div>100%</div></div><div><div>Claim</div><div>100%</div></div><div><div>L_Art</div><div>100%</div></div><div><div>L_TheftDamage</div><div>100%</div></div><div><div>L_Auto</div><div>100%</div></div><div><div>L_TheftDamage</div><div>100%</div></div><div><div>L_Home & Furniture</div><div>100%</div></div><div><div>L_TheftDamage</div><div>100%</div></div><div><div>L_Personal</div><div>100%</div></div><div><div>L_Death</div><div>100%</div></div><div><div>L_Injury/Medical</div><div>100%</div></div><div><div>L_Personal Items</div><div>100%</div></div><div><div>L_TheftDamage</div><div>100%</div></div><div><div>L_Pet</div><div>100%</div></div><div><div>L_Death/Injury</div><div>100%</div></div></div></div><div><div>BillingRefund</div><div><div>Average Precision</div><div>99%</div><div>True Label Count</div><div>26</div><div>Predicted Label Count</div><div>25</div><div>Label Count Error</div><div>0%</div></div><div><div>Model Warnings</div><div><div>There are no warnings for this label.</div></div><div><div>Recommended Actions</div><div><div>Provide more varied training examples for BillingRefund</div></div></div><div><div>Threshold</div><div><div>High Recall</div><div>Balanced</div><div>100%</div></div><div><div>63.2 %</div></div><div><div>Precision</div><div>100%</div></div><div><div>Recall</div><div>92%</div></div></div><div><div>For every 100 verbatims, you can expect about 6 to be wrongly labelled as BillingRefund.</div><div>For every 100 verbatims, which should have been correctly labelled as BillingRefund, you can expect to miss about 8.</div></div></div></div></div><div><div>Setting a confidence threshold</div></div></div><div><div><div>Here you can:</div><div><div><div>• Give the stream a title and a description</div><div>• Set an API name</div><div>• Specify the model (labeller) version to use (this is very important)</div><div>• Use the filters bar on the left-hand-side to set user-property filters which must be satisfied for verbatims to enter the queue for the stream</div><div>• Select a label and a confidence threshold as per below:</div></div></div></div></div><div><div><div>https://support.reinfer.io/support/solutions/articles/48000982498-create-a-stream</div></div></div></div>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>When UiPath Communications Mining selects a document as a data source, it has selected that data source as meeting the confidence threshold. If no document meets the confidence threshold, Communications Mining does not select that document as a data source.</p> <p>For another example, UiPath Process Mining selects at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by identifying “valuable” and “impactful” processes. <i>See, e.g.,</i> https://www.uipath.com/rpa/what-is-process-mining (“<i>Identifies the most valuable, impactful places to insert automation</i>”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can <i>identify problems</i>, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to <i>identify, monitor, and improve business processes</i>” and based on “event-log data, process mining algorithms <i>generate a model that shows the process as it really is, not as it is perceived</i>. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... <i>data connections available to multiple and/or different databases</i> ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.”); <i>id.</i> at 11 (UiPath Process Mining was used “to <i>evaluate more than 200,000 items</i>, including purchase orders and invoices”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath</p>

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	<p>White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite selects at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by “finding the right data.” UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“<i>To help with finding the right data</i>, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, <i>enabling scalable and efficient test data management</i>. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to <i>connect to a range of databases</i>, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to <i>execute actions within the database</i> such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to <i>leverage external web services</i> (e.g., Mockaroo, Azure OpenAI, OpenAI) <i>and custom web services</i> (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically during automated test execution</i> through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources</i>, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “<i>parameterize your test with data variables and link it to an external data source</i> so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly manage test data tailored to your testing needs</i>, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can <i>efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath Attended Robots select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including the data source with the needed information. <i>See, e.g.</i>, UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through <i>your company’s different systems</i> for you <i>to find what you need</i>.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in <i>relevant information from a variety of different systems</i>. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”).</p> <p>For another example, UiPath AI Center selects at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by validating predictions related to a data source. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. <i>When the prediction is returned, the robot acts on the results and continues the process to completion.</i> The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and <i>validate predictions</i>, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data, they recognize patterns and make predictions</i>. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users <i>validate low-confidence predictions made by the model and reroute incorrect predictions for retraining</i>. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> (“It’s also important to note that your <i>ML models are best when working with the most relevant data</i>. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, <i>making accurate predictions based off automated document processes</i>.”).</p> <p>For another example, UiPath Document Understanding selects at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including a confidence threshold for each document or field within a document. <i>See, e.g.</i>, UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 7 (“A <i>minimum confidence threshold is set for each document or field</i> to define which extractor is optimal for a specific part.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>10E. To monitor, based on a set schedule, the at least one data</p>	<p>All versions and implementations of UiPath products monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
<p>source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof; and</p>	<p>matches the query, newly added data that matches the query, or a combination thereof. The monitoring may be performed by data extractors that monitor changes to a data source in real-time. When information at the data sources is updated or located to match the query terms, a data extractor extracts the data to be analyzed. <i>See</i> Claim 1E.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including real-time monitoring of emails or other communications.</p> <p><i>See, e.g.,</i> UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels– extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>see also</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (same; “UiPath gives businesses” this ability, “driving continuous improvement”; explaining how to “[m]onitor your communication”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<div><h2>How does communications mining work?</h2><p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p><div><div><p>1</p><p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p></div><div><p>2</p><p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p></div><div><p>3</p><p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p></div><div><p>4</p><p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p></div><div><p>5</p><p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p></div><div><p>6</p><p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p></div></div><p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p><p>13</p></div>
	<div><h3>Scale your Automations with UiPath Communications Mining</h3><p>https://www.youtube.com/watch?v=Qayl7M8u5AQ</p></div>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>For another example, UiPath Process Mining monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including the continuous monitoring of processes to gain “real time insight”. <i>See, e.g.,</i> https://www.uipath.com/product/process-mining (“Continuous monitoring: Continuously adapt to changing conditions with complete and real time insight into how processes are executed and KPI impact.”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining benefits [...] Continuously monitor processes and measure improvements”); <i>id.</i> (“So you’ll have the facts you need to understand, improve, and monitor how things get done... anywhere they’re getting done.”); <i>id.</i> (“Continuously monitors automation performance and ROI”); https://www.uipath.com/platform/discover/process-mining (“Monitor KPIs via dashboards that track processes such as purchase-to-pay, order-to-cash, incident management, and others.”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous</p>

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	<p>improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>For another example, UiPath Automation Hub monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, through integration with other UiPath “Discover” features. <i>See, e.g.,</i> https://www.uipath.com/product/automation-hub (“Crowdsourcing automation ideas or use Process Mining, Task Mining, and Communications Mining for data-driven discovery. Track everything from idea to production in one place—with visibility and control.”).</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Orchestrator monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including output of UiPath robots. <i>See, e.g.,</i> https://www.uipath.com/product/orchestrator (“Orchestrator tracks and logs everything every robot does, along with everything people do with robots, so you can keep compliant and secure. Drill-down dashboards and UiPath Insights give you full visibility from deployment to ROI.”).</p> <p>For another example, UiPath Test Suite monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including by identifying and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath</p>

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	<p>Heatmap, UiPath Integration Service) to generate and <i>identify test data</i> from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient <i>test data management</i>. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to <i>execute actions within the database</i> such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”)</p> <p>“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically</i> during automated test execution through low-code automation.” <i>Id.</i>; <i>id.</i> (“One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources</i>, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly manage test data</i> tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can <i>efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p>

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	<p>For another example, UiPath Action Center monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including the monitoring of processes. <i>See, e.g.</i>, UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf (“Benefits of Using Action Center... Monitor and manage processes from a portal.”).</p> <p>For another example, UiPath AI Center monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including monitoring information and processes in order to act on the data. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“Continuously improve your models by bringing humans to handle exceptions, validate data and send it for retraining.”); <i>id.</i> (“Constantly train and improve ML models using the human validated data.”); <i>id.</i> (“Manage – Monitor and manage your AI skills ensuring the highest efficiency”); UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> at 8 (“RPA brings efficiencies and</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. <i>Your automations can go from reading emails, to sorting and classifying them.</i> RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Attended Robots monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including the monitoring of processes and information in real-time. <i>See, e.g., https://www.uipath.com/product/attended-automation</i> (“Use desktop triggers to set up robots that monitor activities behind the scenes <i>and automatically start processes based on user actions.</i>”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, <i>interact with data</i>, and more”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and <i>real-time forms bring in relevant information</i> from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information as they work.</i>”).</p> <p>For another example, UiPath Document Understanding monitors, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including monitoring variable parts of documents. <i>See, e.g.,</i> UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, <i>even when the type or format of the document changes</i>”); <i>id.</i> at 6 (“Document data is <i>exported for further use</i> in various systems according to your business needs.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to six people, whose <i>job is to monitor the bots</i>” and “check to make sure that the <i>data being fetched using document understanding is at par.</i>”); <i>id.</i> at 10 (the human team “<i>monitor[s] the processes</i>”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly monitor, based on a set schedule, the at least one data source to extract data from the at least one data</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
<p>10F. To establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source.</p>	<p>source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p> <p>All versions and implementations of UiPath products establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source. A communication channel may be established with specific individuals, other users, and/or another entity such as a robot (both within the client organization and without), and based in part on the analyzed data. <i>See</i> Claim 1F.</p> <p>In particular, after extracting data from the at least one monitored data source via UiPath Communications Mining, all versions and implementations of UiPath products take the information and establish a communication channel with a second user.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including to monitor and analyze the extracted data. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Business users then rapidly train the model, tailoring its output to the exact needs of the business.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>“UiPath Robots use the data created by Communications Mining to extend automation into service and conversation-based processes. This allows businesses to automate transactional requests and workflows. Tasks like triaging emails, updating customer information, and case creation are now automated from end to end by UiPath.” <i>Id.</i></p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.’”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p><i>used for real-time analysis and automation.”); id. at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); id. at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); id. at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels— extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); id. at 12 (lists various use cases for different industries); id. at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); id. at 13:</i></p> <p>How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <div> <div> <p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> </div> <div> <p>2</p> <p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> </div> <div> <p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> </div> <div> <p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> </div> <div> <p>5</p> <p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> </div> <div> <p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> </div> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p> <p>13</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>For another example, UiPath Process Mining establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, you can proactively alert someone in UiPath Action Center whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Insights establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by exporting the data for analysis. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-insights (“Export and analyze your Insights data with real-time data export to Splunk, PowerBI, and Elasticsearch.”).</p> <p>For another example, UiPath Test Suite establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by updating and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 10	UiPath Accused Products
	<p>Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This <i>enables testing teams to leverage</i> external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically</i> during automated test execution through low-code automation. One of UiPath's core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, <i>as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.</i>"); <i>id.</i> at 6 (UiPath Test Suite can "parameterize your test with data variables and link it to an external data source so that <i>you can maintain just one automated test to execute multiple data variations.</i> UiPath Studio empowers you to perform Data-Driven Testing <i>by providing integrations with your preferred test data source</i>, whether it's a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to <i>manage your test data directly</i> within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments.</i> The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities <i>empower you to effortlessly manage test data</i> tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines."); <i>id.</i> ("By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, <i>you can efficiently manage data</i> while minimizing redundancy.").</p> <p>UiPath products including UiPath's "Build/Automate" features also each perform this element.</p> <p>For another example, UiPath Action Center establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes ("With the latest integration between UiPath Process Mining and UiPath Action Center, you can <i>proactively alert someone</i> in UiPath Action Center whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.").</p>

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Claim 10	UiPath Accused Products
	<p>For another example, UiPath AI Center establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including for use in monitoring and training. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, manage, and improve machine learning models.”); <i>id.</i> (“Continuously improve your models by bringing humans to handle exceptions, validate data and send it for retraining.”).</p> <p>UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”).</p> <p>For another example, UiPath Attended Robots establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including seeking input from human users. <i>See, e.g.</i>, https://www.uipath.com/product/attended-automation (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”).</p> <p>“[P]eople and robots work together to accomplish a complex task”; alternatively, “robots will work on a task and loop in their human teammates to handle an exception or make a decision.” UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise”, at 2; <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at</p>

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Claim 10	UiPath Accused Products
	<p>5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Document Understanding establishes a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by asking the second user for validation. <i>See, e.g.</i>, UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can ask for employee validation if needed and will automatically learn from the human validated data.”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”).</p> <p>UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to six people, whose job is to monitor the bots” and “check to make sure that the data being fetched using document understanding is at par.”); <i>id.</i> at 10 (the human team “monitor[s] the processes”); <i>id.</i> at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction can pull data from documents and feed it selectively into integrated systems”); <i>id.</i> at 17 (with Document Understanding, “[p]eople can now delegate paperwork to software robots, while robots still go to humans for validation when it’s needed.”); <i>id.</i> at 13:</p>

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	<div> <p>The diagram shows four document icons on the left, each with a colored header (teal, pink, purple, orange). A yellow arrow points from these icons to a central teal box labeled 'Document Understanding Data Extraction'. From this central box, four yellow arrows point to four colored boxes: 'System A' (teal), 'System B' (pink), 'System C' (orange), and 'System D' (purple).</p> </div> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
Claim 11 Pre, The apparatus of Claim 10, in which the at least one processor is further configured:	All versions and implementations of UiPath products practice the apparatus of Claim 10. <i>See</i> Claim 10.
11A. To analyze the extracted data; and	<p>All versions and implementations of UiPath products analyze the extracted data. <i>See</i> Claim 2A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining analyzes the extracted data, including data from emails and other communications. <i>See, e.g.,</i> https://www.uipath.com/product/communications-mining (“UiPath Communications Mining turns every message into actionable data, in real time and on any communications channel.”); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining is a new capability to understand and automate business communications. It uses state-of-the-art AI models to turn business messages—from emails to tickets—into actionable data. It does this in real time and on all major business communications channels.”).</p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale large volumes of communications data’ from multiple sources such as emails, surveys, tickets and social media feeds.”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications</p>

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Claim 11	UiPath Accused Products
	<p>mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and <i>people ready to take it through a quick and easy training process.</i>"); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 17 ("Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it's <i>designed to extract insight from unstructured data</i>—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can't do... Each is closely intertwined and works together."); <i>id.</i> at 13:</p> <div> <h3>How does communications mining work?</h3> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data.</p> <p>It shows you what people are saying, how frequently they are saying it, and in what context.</p> <div> <div> <p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> </div> <div> <p>2</p> <p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> </div> <div> <p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> </div> <div> <p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> </div> <div> <p>5</p> <p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> </div> <div> <p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> </div> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p> <p>13</p> </div> <p>For another example, UiPath Process Mining analyzes the extracted data, including business applications data to understand end-to-end processes. <i>See, e.g.,</i> https://www.uipath.com/product/process-mining ("Use the data from your business applications to <i>give you a detailed understanding</i> of complex business processes. You'll know what to automate, how to improve your processes – and be able to prove impact, too."); <i>id.</i> ("Process Mining - <i>analyze data from business applications</i> to understand end-to-end processes"); https://www.uipath.com/blog/industry-solutions/how-process-mining-helps-banks-evolve ("Process</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p>mining objectively discovers processes. The technology <i>analyzes processes in a very detailed way</i>, providing specific observations and insights for improvement.”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining connects to source systems for a <i>continuous view</i> into how business processes are executed.”).</p> <p>“Process mining is a powerful technology that can help businesses <i>gain visibility</i> into their processes. It does this by tracing the digital footprints left behind in systems and applications. Process mining then <i>transforms that raw data into intuitive visualizations of process flows</i>. It makes those complex and wide-ranging processes, like procure-to-pay (P2P) and order-to-cash (O2C), tangible. With thorough and fact-based visualizations, you can spot process bottlenecks, inefficiencies, and risks, at a glance.” https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes.</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end <i>understanding of processes</i> so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (<i>uses “existing system data</i> to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. <i>Analysis can be enhanced</i> by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and <i>transform data</i> without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly <i>integrates process understanding</i> and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive <i>process understanding</i> solution.”); <i>id.</i> at 11 (UiPath Process Mining was <i>used “to evaluate</i> more than 200,000 items, including purchase orders and invoices”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4 (“In addition, process mining can <i>break down silos of data about how different systems and parts of the organization work and interact</i>. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now relate the candidate process to other tasks or processes to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.”); <i>id.</i> at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that <i>provides a comprehensive mix of discovery, analysis</i>, and execution capabilities. The goal is</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p>to <i>fully understand your processes</i>, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”).</p> <p>For another example, UiPath Task Mining analyzes the extracted data, including data regarding employees’ desktop activities to determine improvement opportunities. <i>See, e.g.</i>, https://www.uipath.com/product/task-mining (“Get an <i>objective data-driven picture of as-is processes</i>, quicker and with fewer resources involved.”); <i>id.</i> at Video (analyzing daily task of employees to scale up automations; “the first stage is all about collecting” – automatically collecting and upload data from employees’ computers and <i>then analyzing those findings</i> “by exporting findings into UiPath Studio or as a detailed “Process Definition” document”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “<i>Combined with Task Mining</i>, UiPath Process Mining offers the most <i>comprehensive process understanding solution.</i>”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a <i>comprehensive mix of discovery, analysis, and execution capabilities.</i> The goal is to <i>fully understand your processes</i>, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p>For example, UiPath Orchestrator analyzes the extracted data, including as the centralized hub to deploy, manage, and govern all the UiPath Robots, both attended and unattended, which function to analyze data by teaching robots new AI skills, including reading documents, recognizing dynamic interfaces and understanding conversations to make complex decisions.</p> <p>https://docs.uipath.com/orchestrator/standalone/2023.4/user-guide/about-robots. See, e.g., https://www.uipath.com/product/attended-automation (“Use desktop triggers to set up robots that monitor activities behind the scenes and automatically start processes based on user actions.”); <i>id.</i> (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”).</p> <p>UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 2 (“people and robots work together to accomplish a complex task” or “robots will work on a task and loop in their human teammates to handle an exception or make a decision”; “people and robots work together and share a computer and its resources”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Insights analyzes the extracted data, including by enabling businesses to track, measure, and manage performance of an automation program. See, e.g., https://www.uipath.com/product/rpa-insights (“UiPath Insights is an RPA analytics solution that enables your business to track, measure, and manage the performance of your entire automation program—so you can scale your automation journey to the next level.”); <i>id.</i> (“Visualize automation complexity, estimated costs, and benefits of your projects with the Automation Hub integration. Compare estimated vs actual ROI of automation ideas.”); <i>id.</i> (“Measure and report on the performance of document-processing automations with an integration with Document Understanding”); <i>id.</i> (“Situational awareness of your RPA operations is critical to being able to measure and analyze everything from Robot and process performance, to transactions and exceptions. Start with the Robots, Queues, and Processes dashboards to get deeper visibility into your RPA operations.”); <i>id.</i> (“Track and measure automation performance[:] Start out with a library of customizable pre-built dashboard templates to track your robots, queues, and</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p>processes. With <i>self-serve analytics</i>, you and your team can <i>measure and forecast</i> the performance of each robot to make informed decisions that reduce errors, maximize usage, and improve efficiency.”).</p> <p>For another example, UiPath Test Suite analyzes the extracted data, including test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To <i>help with finding the right data</i>, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to <i>generate and identify test data from usage data of your software apps.</i>”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are <i>designed to handle complex and large data sets, enabling scalable and efficient test data management.</i> UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to <i>execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.</i>”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This <i>enables testing teams to leverage external web services</i> (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically during automated test execution</i> through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, <i>these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.</i>”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that <i>you can maintain just one automated test to execute multiple data variations.</i> UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, <i>data-driven testing</i> not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments.</i> The tools offer a centralized, secure,</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p>and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly manage test data tailored to your testing needs</i>, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, <i>you can efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath Action Center analyzes the extracted data, including by integrating other UiPath products. <i>See, e.g.</i>, UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf (“Action Center gives you management tools to monitor processes from start to finish, <i>identify</i>, and resolve resource bottlenecks.”); https://docs.uipath.com/action-center/automation-cloud/latest/user-guide/introduction (“Action Center offers business users <i>a way to handle actionable items</i>, and provide business inputs to Robots”).</p> <p>For another example, UiPath AI Center analyzes the extracted data, including by deploying, consuming, managing, and improving machine learning models. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you <i>orchestrate all moving pieces</i> of AI - deploy, consume, manage, and improve machine learning models.”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:03) (“AI Center has machine learning (ML) automations, including <i>document processing, object detection, text classification, sentiment analysis, entity recognition, anomaly detection, demand forecasting, and more</i>”); https://docs.uipath.com/ai-center/automation-cloud/latest/user-guide/about-ai-center (“AI Center is the infrastructure on top of which UiPath Document Understanding machine learning models run.”).</p> <p>As a particular example, UiPath AI Center uses UiPath Document Understanding to analyze, extract, interpret, and process data, from PDFs, images, handwriting, and scans. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and <i>then accurately process the information</i> within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p>productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When <i>the prediction is returned, the robot acts on the results and continues the process to completion</i>. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data, they recognize patterns and make predictions</i>. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“It’s also important to note that your ML models are best when <i>working with the most relevant data</i>. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to <i>process structured documents</i>; adding AI takes the automation even further, <i>making accurate predictions</i> based off automated document processes.”).</p> <p>For another example, UiPath Document Understanding analyzes the extracted data, including extracting and processing data from documents of many types. <i>See, e.g.</i>, UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 7 (“The artificial intelligence and document understanding features are very good and have been helpful when it comes to <i>processing handwritten or unstructured [data]</i>, especially when there is a high volume and it is repetitive.”); <i>id.</i> at 8 (Document Understanding is “<i>able to read handwriting</i> with 90% to 95% accuracy.”); <i>id.</i> at 11 (“processing the PDF version of an invoice” involves “the capability to scan an invoice and then <i>pick out the required fields</i>, such as the name of the vendor, the details of the products being sent, or the cost of the product”); <i>id.</i> at 13 (Document Understanding has the “<i>ability to extract data from documents for use in downstream workflows</i>” and “<i>extract[s] the data into different types</i>”; “Data extraction can pull data from documents and <i>feed it selectively into integrated systems</i>”); <i>id.</i> at 15 (Document Understanding has the ability to <i>extract data “in different formats”</i> including native PDFs, scanned PDFs, handwritten invoices or pictures).</p> <p>UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can ask for employee validation if needed and will</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p><i>automatically learn from the human validated data.</i>”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> at 6 (“Document data is exported for further use in various systems according to your business needs.”); <i>id.</i> (“A minimum confidence threshold is set for each document or field to define which extractor is optimal for a specific part.”); <i>id.</i> at 8 (“Whether your documents are structured, semi-structured, or unstructured, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills” and unstructured documents with no fixed format such as “various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to extract document data from these special cases.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly analyze the extracted data. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>11B. To receive feedback from the user based at least in part on the established communication channel.</p>	<p>All versions and implementations of UiPath products receive feedback from the user based at least in part on the established communication channel. A communication channel may be established with specific individuals and/or other users, and/or another entity such as a robot (both within the client organization and without), and based in part on analyzing the extracted data. Users can be human users, computers, AI-generated users, UiPath robots, or other user types. <i>See</i> Claim 2B.</p> <p>In particular, after extracting data from the at least one monitored data source via Communications Mining, all versions and implementations of UiPath products receive feedback from the user based at least in part on the established communication channel.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining receives feedback from the user based at least in part on the established communication channel, including to monitor and analyze the extracted data. <i>See, e.g.,</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p>https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Business users then rapidly train the model, tailoring its output to the exact needs of the business.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>“UiPath Robots use the data created by Communications Mining to extend automation into service and conversation-based processes. This allows businesses to automate transactional requests and workflows. Tasks like triaging emails, updating customer information, and case creation are now automated from end to end by UiPath.” <i>Id.</i></p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p><i>people ready to take it through a quick and easy training process.”); id. at 12 (lists various use cases for different industries); id. at 13:</i></p> <div> <h3>How does communications mining work?</h3> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <div> <div>1</div> <div>2</div> <div>3</div> <div>4</div> <div>5</div> <div>6</div> </div> <div> <p>1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> <p>2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> <p>3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> <p>4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> <p>5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> <p>6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div> <p>For another example, UiPath Process Mining receives feedback from the user based at least in part on the established communication channel, including by alerting the second user to information about processes. See, e.g., https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially <i>works by bringing humans into the automation loop</i> to manage exceptions, issue approvals, and process escalations.”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and <i>establish a cycle of continuous monitoring and improvement</i>”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The <i>result is</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p><i>then used for process discovery, conformance checking, and process enhancement.”); id. at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); id. at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.”).</i></p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to receive feedback from the user based at least in part on the established communication channel. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p>For example, UiPath Insights receives feedback from the user based at least in part on the established communication channel, including by exporting the data for analysis. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-insights (“<i>Export and analyze your Insights data</i> with real-time data export to Splunk, PowerBI, and Elasticsearch.”).</p> <p>For another example, UiPath Test Suite receives feedback from the user based at least in part on the established communication channel, including by updating and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to <i>generate and identify test data from usage data of your software apps.</i>”); <i>id.</i> (“<i>UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments.</i> Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies <i>test data synchronization through integrated solutions</i> (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data <i>across multiple test environments and teams.</i>”); <i>id.</i> at 5 (“UiPath Database Activities <i>allow you to connect to a range of databases</i>, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This <i>enables you to execute actions within the database</i> such as transactions, queries, or non-queries (e.g., update, insert, delete) <i>to collect, generate, and/or modify test data.</i>”); <i>id.</i> (“UiPath simplifies API-related test data tasks by <i>offering connectors for external applications</i> via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This <i>enables testing teams to leverage</i> external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically</i> during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, <i>as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.</i>”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that <i>you can maintain just one automated test to execute multiple data variations.</i> UiPath Studio empowers you to perform Data-Driven Testing <i>by providing integrations with your preferred test data source</i>, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p>for your automated test cases. If you prefer to <i>manage your test data directly</i> within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities <i>empower you to effortlessly manage test data</i> tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, <i>you can efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Action Center receives feedback from the user based at least in part on the established communication channel, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.”).</p> <p>For another example, UiPath AI Center receives feedback from the user based at least in part on the established communication channel, including for use in monitoring and training. <i>See, e.g.,</i> UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, <i>manage, and improve machine learning models.</i>”); <i>id.</i> (“Continuously <i>improve your models by bringing humans to handle exceptions, validate data and send it for retraining.</i>”; “Constantly train and improve ML models using the <i>human validated data.</i>”); <i>id.</i> (“Manage – <i>Monitor and manage your AI skills</i> ensuring the highest efficiency”)).</p> <p>UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, <i>the robot asks AI for a prediction</i>, supplying any required data from the process. When <i>the prediction is returned, the robot acts on the results</i> and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. <i>You can manage</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p><i>your models and track their progress.</i> You can <i>engage with models and validate predictions</i>, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data</i>, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“<i>Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining.</i> This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”).</p> <p>For another example, UiPath Attended Robots receive feedback from the user based at least in part on the established communication channel, including seeking input from human users. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, <i>robots present data to employees and source their input to use it further in the automation process.</i>”).</p> <p>“<i>[P]eople and robots work together</i> to accomplish a complex task”; alternatively, “<i>robots will work on a task and loop in their human teammates</i> to handle an exception or make a decision.” UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise”, at 2; <i>id.</i> at 4 (robots “log into applications, move files and folders, copy and paste, fill in forms, <i>interact with data</i>, and more”); <i>id.</i> (“Need some information on a client for an upcoming meeting? <i>You can ask your robot coworker</i> to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“<i>the robot works behind the scenes to get information and update other systems for you.</i> UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also <i>allow the user to take action on that information</i> by updating those system[s] <i>on behalf of the user.</i>”); <i>id.</i> at 6 (“a <i>specific action you take triggers a robot</i> to start a task”); <i>id.</i> at 7 (“<i>Multiple robots work together</i> to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>For another example, UiPath Document Understanding receives feedback from the user based at least in part on the established communication channel, including by asking the second user for validation. <i>See, e.g.,</i> UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can <i>ask for employee validation if needed and will automatically learn from the human validated data.</i>”; “The more <i>you work with these models</i>, the more trained and accurate they become.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be <i>paired with our rich ecosystem of partners</i> to meet your needs in unstructured data extraction.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 15 (“Communications mining can be an important component in intelligent document processing (IDP).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 11	UiPath Accused Products
	<p>Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”).</p> <p>UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to <i>six people</i>, whose <i>job is to monitor the bots</i>” and “<i>check to make sure that the data being fetched</i> using document understanding is at par.”); <i>id.</i> at 10 (the <i>human team “monitor[s] the processes”</i>); <i>id.</i> at 13 (Document Understanding has the “ability to extract data from documents for <i>use in downstream workflows</i>” and “extract[s] the data into different types”; “<i>Data extraction can pull data from documents and feed it selectively into integrated systems</i>”); <i>id.</i> at 17 (with Document Understanding, “[p]eople can now delegate paperwork to software robots, <i>while robots still go to humans for validation when it’s needed.</i>”); <i>id.</i> at 13:</p> <div> <pre> graph LR subgraph Documents D1[Document 1] D2[Document 2] D3[Document 3] D4[Document 4] end subgraph Systems SA[System A] SB[System B] SC[System C] SD[System D] end DUE[Document Understanding Data Extraction] D1 --> DUE D2 --> DUE D3 --> DUE D4 --> DUE DUE --> SA DUE --> SB DUE --> SC DUE --> SD </pre> </div> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly receive feedback from the user based at least in part on the established communication channel. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 12	UiPath Accused Products
Claim 12Pre. The apparatus of Claim 11, in which the at least one processor is further configured:	All versions and implementations of UiPath products practice the apparatus of Claim 11. <i>See</i> Claim 11.
12A. To visualize at least the extracted data, the analyzed data, or a combination thereof.	<p>All versions and implementations of UiPath products visualize at least the extracted data, the analyzed data, or a combination thereof. <i>See</i> Claim 3A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining visualizes at least the extracted data, the analyzed data, or a combination thereof, including data from emails and other communications. <i>See, e.g.,</i> https://www.uipath.com/product/communications-mining (“UiPath Communications Mining turns every message into actionable data, in real time and on any communications channel.”); <i>id.</i> (“Communications Mining gives businesses insight into previously hidden processes and channels.”); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining is a new capability to understand and automate business communications. It uses state-of-the-art AI models to turn business messages—from emails to tickets—into actionable data. It does this in real time and on all major business communications channels.”).</p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale large volumes of communications data’ from multiple sources such as emails, surveys, tickets and social media feeds.”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 12	UiPath Accused Products
	<p>end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to <i>create a structured output</i>, where each request is a separate 'extraction' containing the intent and all associated data.”); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s <i>designed to extract insight from unstructured data</i>—specifically communications data like emails, service requests, and support tickets. It <i>automates conversational business processes</i>; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p> <div> <h3>How does communications mining work?</h3> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <ol style="list-style-type: none"> Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications. AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change. Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div> <p>For another example, UiPath Process Mining visualizes at least the extracted data, the analyzed data, or a combination thereof, including business applications data to understand end-to-end processes. <i>See, e.g.,</i> https://www.uipath.com/product/process-mining (“Use the data from your business applications to <i>give you a detailed understanding</i> of complex business processes. You’ll know what to automate, how to improve your processes – and be able to prove impact, too.”); <i>id.</i> (“Process Mining - <i>analyze data from business applications</i> to understand end-to-end processes”); https://www.uipath.com/blog/industry-solutions/how-process-mining-helps-banks-evolve (“Process mining objectively discovers processes. The technology <i>analyzes processes in a very detailed way, providing specific observations and insights for improvement.</i>”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining connects to source systems for a <i>continuous view into how business processes are executed.</i>”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 12	UiPath Accused Products
	<p>“Process mining is a powerful technology that can help businesses <i>gain visibility</i> into their processes. It does this by tracing the digital footprints left behind in systems and applications. Process mining then <i>transforms that raw data into intuitive visualizations of process flows</i>. It <i>makes those complex and wide-ranging processes</i>, like procure-to-pay (P2P) and order-to-cash (O2C), <i>tangible</i>. With <i>thorough and fact-based visualizations</i>, you can spot process bottlenecks, inefficiencies, and risks, at a glance.” https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes.</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “<i>end-to-end understanding of processes</i> so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (<i>uses “existing system data</i> to identify, monitor, and improve business processes” and <i>based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived</i>. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly <i>integrates process understanding</i> and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 10 (“product ensures <i>a single source of truth by centralizing data</i> and dashboard management”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the <i>most comprehensive process understanding</i> solution.”); <i>id.</i> at 11 (UiPath Process Mining was <i>used “to evaluate</i> more than 200,000 items, including purchase orders and invoices”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4 (“In addition, process mining can <i>break down silos of data about how different systems and parts of the organization work and interact</i>. While the first generation of automation was focused on a single task or process, <i>process mining aggregates data from all these systems and workflows</i>. You can now relate the candidate process to other tasks or processes to <i>create full visibility</i> into end-to-end processes - such as order management or procurement – that span systems and departments.”); <i>id.</i> at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that <i>provides a comprehensive mix of discovery, analysis</i>, and execution capabilities. The goal is to <i>fully understand your processes</i>, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 12	UiPath Accused Products
	<p>For another example, UiPath Task Mining visualizes at least the extracted data, the analyzed data, or a combination thereof, including data regarding employees' desktop activities to determine improvement opportunities. <i>See, e.g.,</i> https://www.uipath.com/product/task-mining (“Get an objective data-driven picture of as-is processes, quicker and with fewer resources involved.”); <i>id.</i> at Video (analyzing daily task of employees to scale up automations; “the first stage is all about collecting” – automatically collecting and upload data from employees’ computers and then analyzing those findings “by exporting findings into UiPath Studio or as a detailed “Process Definition” document”).</p> <p>UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to visualize at least the extracted data, the analyzed data, or a combination thereof. UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Orchestrator visualizes at least the extracted data, the analyzed data, or a combination thereof, including as the centralized hub to deploy, manage, and govern all the UiPath</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 12	UiPath Accused Products
	<p>Robots, both attended and unattended, which function to analyze data by teaching robots new AI skills, including reading documents, recognizing dynamic interfaces and understanding conversations to make complex decisions. https://docs.uipath.com/orchestrator/standalone/2023.4/user-guide/about-robots. See, e.g., https://www.uipath.com/product/attended-automation (“Use desktop triggers to set up robots that monitor activities behind the scenes and automatically start processes based on user actions.”); <i>id.</i> (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”); https://www.uipath.com/product/orchestrator (“Orchestrator tracks and logs everything every robot does, along with everything people do with robots, so you can keep compliant and secure.”);</p> <p>UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”).</p> <p>For another example, UiPath Insights visualizes at least the extracted data, the analyzed data, or a combination thereof, including by enabling businesses to track, measure, and manage performance of an automation program. See, e.g., https://www.uipath.com/product/rpa-insights (“UiPath Insights is an RPA analytics solution that enables your business to track, measure, and manage the performance of your entire automation program—so you can scale your automation journey to the next level.”); <i>id.</i> (“Visualize automation complexity, estimated costs, and benefits of your projects with the Automation Hub integration. Compare estimated vs actual ROI of automation ideas.”); <i>id.</i> (“Measure and report on the performance of document-processing automations with an integration with Document Understanding”); <i>id.</i> (“Situational awareness of your RPA operations is critical to being able to measure and analyze everything from Robot and process performance, to transactions and exceptions. Start with the Robots, Queues, and Processes dashboards to get deeper visibility into your RPA operations.”); <i>id.</i> (“Track and measure automation performance[:] Start out with a library of customizable pre-built dashboard templates to track your robots, queues, and processes. With self-serve analytics, you and your team can measure and forecast the performance of each robot to make informed decisions that reduce errors, maximize usage, and improve efficiency.”).</p> <p>For another example, UiPath Test Suite visualizes at least the extracted data, the analyzed data, or a combination thereof, including the test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 12	UiPath Accused Products
	<p>capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps."); <i>id.</i> ("UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams."); <i>id.</i> at 5 ("UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data."); <i>id.</i> ("UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath's core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution."); <i>id.</i> at 6 (UiPath Test Suite can "parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it's a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines."); <i>id.</i> ("By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.").</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 12	UiPath Accused Products
	<p>UiPath products including UiPath's "Build/Automate" features also each perform this element.</p> <p>For example, UiPath Action Center visualizes at least the extracted data, the analyzed data, or a combination thereof, including by integrating other UiPath products. <i>See, e.g.</i>, UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf ("Action Center gives <i>you management tools to monitor processes from start to finish</i>, identify, and resolve resource bottlenecks."); https://docs.uipath.com/action-center/automation-cloud/latest/user-guide/introduction ("Action Center offers business users <i>a way to handle actionable items</i>, and provide business inputs to Robots").</p> <p>For another example, UiPath AI Center visualizes at least the extracted data, the analyzed data, or a combination thereof, including by deploying, consuming, managing, and improving machine learning models. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure ("UiPath AI Center helps you <i>orchestrate all moving pieces</i> of AI - deploy, consume, manage, and improve machine learning models."); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:03) ("AI Center has machine learning (ML) automations, including <i>document processing, object detection, text classification, sentiment analysis, entity recognition, anomaly detection, demand forecasting, and more</i>"); https://docs.uipath.com/ai-center/automation-cloud/latest/user-guide/about-ai-center ("AI Center is the infrastructure on top of which UiPath Document Understanding machine learning models run.").</p> <p>As a particular example, UiPath AI Center uses UiPath Document Understanding to visualize at least the extracted data, the analyzed data, or a combination thereof, including to extract, interpret, and process data, from PDFs, images, handwriting, and scans. <i>See, e.g.</i>, UiPath White Paper, "Bringing the Power of AI and RPA Together with AI Center," at 4 ("Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, <i>robots can learn to recognize patterns in unstructured documents and then accurately process the information</i> within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity."); <i>id.</i> at 6 ("AI Center <i>helps you orchestrate all moving pieces</i> of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 12	UiPath Accused Products
	<p>accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data, they recognize patterns and make predictions</i>. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to <i>process structured documents</i>; adding AI takes the automation even further, <i>making accurate predictions</i> based off automated document processes.”).</p> <p>For another example, UiPath Document Understanding visualizes at least the extracted data, the analyzed data, or a combination thereof, including extracting and processing data from documents of many types. <i>See, e.g.</i>, UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 7 (“The artificial intelligence and document understanding features are very good and have been helpful when it comes to <i>processing handwritten or unstructured [data]</i>, especially when there is a high volume and it is repetitive.”); <i>id.</i> at 8 (Document Understanding is “<i>able to read handwriting</i> with 90% to 95% accuracy.”); <i>id.</i> at 11 (“processing the PDF version of an invoice” involves “<i>the capability to scan an invoice and then pick out the required fields</i>, such as the name of the vendor, the details of the products being sent, or the cost of the product”); <i>id.</i> at 13 (Document Understanding has the “<i>ability to extract data from documents for use in downstream workflows</i>” and “<i>extract[s] the data into different types</i>”; “Data extraction can pull data from documents and <i>feed it selectively into integrated systems</i>”); <i>id.</i> at 15 (Document Understanding has the ability to <i>extract data “in different formats”</i> including native PDFs, scanned PDFs, handwritten invoices or pictures).</p> <p>UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can ask for employee validation if needed and will <i>automatically learn from the human validated data.</i>”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> at 6 (“Document data is <i>exported for further use in various systems according to your business needs.</i>”); <i>id.</i> (“A minimum confidence threshold is set for each document or field to define <i>which extractor is optimal for a specific part.</i>”); <i>id.</i> at 8 (“Whether your documents are structured, semi-structured, or unstructured, UiPath Document Understanding can teach robots to <i>read, analyze, and process your documents.</i>”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for <i>processing less structured documents</i>” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills” <i>and unstructured documents with no fixed format</i> such as “various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts”); <i>id.</i> (“For unstructured documents, UiPath</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 12	UiPath Accused Products
	<p>Document Understanding <i>can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.</i>"); <i>id.</i> at 10 ("Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We're ready for that possibility. UiPath Document Understanding offers solutions that can be <i>used to extract document data from these special cases.</i>").</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly visualize at least the extracted data, the analyzed data, or a combination thereof. This element is "a software limitation" as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 13	UiPath Accused Products
Claim 13Pre. The apparatus of Claim 11, in which the at least one processor is further configured:	All versions and implementations of UiPath products practice the apparatus of Claim 11. <i>See</i> Claim 11.
13A. To expand the query comprises expanding the search terms to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof.	<p>All versions and implementations of UiPath products expand the query comprising of expanding the search terms to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, for example, based on search lexicons, expanding the search using misspellings, and/or derivations of the topic of interest/sub-topics. The lexicon may be generated based on user input, automatic word association, synonym/antonym trees, and/or lexicons of positive/negative modifiers. This expansion may be performed by a user and/or may be automated. <i>See</i> Claim 4A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath's "Discover" features each perform this element.</p> <p>For example, UiPath Communication Mining expands the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including by looking for "similar looking emails" with "similar wording" (as examples). <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) ("[S]o what Communications Mining has done is it's looked through all of those emails, all of those hundred and thirteen thousand emails, and it's created a cluster of similar looking emails, right, similar looking emails that all have similar wording." (emphasis added); UiPath White Paper, "The Ultimate Guide to Communications Mining," at 5 ("Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale."); <i>id.</i> at 7 ("UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights."); <i>id.</i> at 11 ("Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there's a high volume of messages passing between colleagues, customers, suppliers, and partners. If there's a business department with a lot of shared mailboxes and systems, it's a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process.").</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

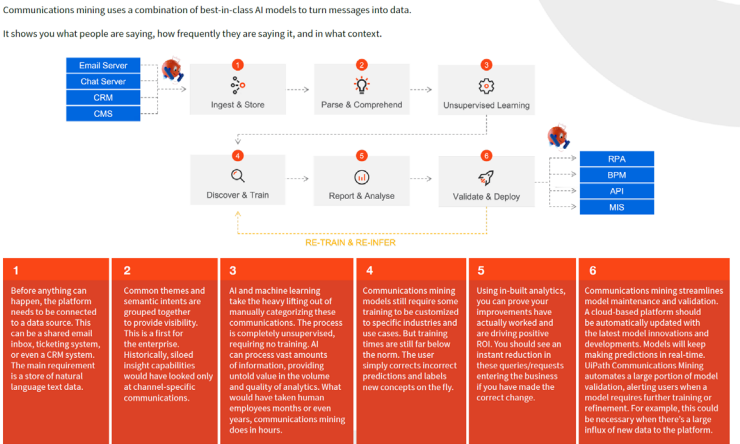
Claim 13	UiPath Accused Products
	<p>UiPath Communication Mining also expands the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including to determine intent, sentiment, and emotion included in communications. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from inbound messages: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> (“The development team is also enhancing the product’s ability to extract intents—like reasons for contact—from messages, and recognize the relationship between multiple intents and key data points like customer numbers, addresses, and dates.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 13:</p> <p style="text-align: center;">How does communications mining work?</p>  <p>The diagram illustrates the communications mining process in six steps:</p> <ol style="list-style-type: none"> 1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. 2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications. 3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. 4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. 5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change. 6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>RE-TRAIN & RE-INFER</p> <p>For another example, UiPath Process Mining expands the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including by adding additional concepts to the initial query. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 13	UiPath Accused Products
	<p><i>the minimal initial data set</i>. The result is then used for process discovery, conformance checking, and process enhancement.”).</p> <p>“In addition, process mining can <i>break down silos of data</i> about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now <i>relate the candidate process to other tasks or processes</i> to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.” UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4.</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to expand the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 13	UiPath Accused Products
	<p>For example, UiPath Test Suite expands the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including by retrieving or generating test data dynamically. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 5 (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either <i>retrieving or generating test data dynamically during automated test execution</i> through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources</i>, such as websites and files. These capabilities not only <i>mitigate manual processes, but also reduce errors</i> during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to <i>generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings</i>. For example, as part of your CI/CD pipeline, <i>these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.</i>”); <i>id.</i> (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This <i>enables you to execute actions within the database such as transactions, queries, or non-queries</i> (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> at 6 (UiPath Test Suite can “<i>parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations</i>. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to <i>define custom data models and manage complex data structures, such as related and reusable records</i>. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 13	UiPath Accused Products
	<p>For example, UiPath Attended Robots expand the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including by taking an action that instructs the robot to expand or share information on the query. <i>See, e.g.</i>, UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath AI Center expands the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof, including by obtaining a prediction related to the query. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly expand the search terms of the query to include at least misspellings, synonyms, sub-topics, antonyms, or a combination thereof as explained above. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 14	UiPath Accused Products
Claim 14Pre. The apparatus of Claim 11, in which the at least one processor is further configured:	All versions and implementations of UiPath products practice the apparatus of Claim 11. <i>See</i> Claim 11.
14A. To refine the search terms based at least in part on the executed query, and to monitor for matches to a refined query.	<p>All versions and implementations of UiPath products refine the search terms based at least in part on the executed query, and to monitor for matches to a refined query. <i>See</i> Claim 5A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining refines the search terms based at least in part on the executed query, and to monitor for matches to a refined query, for example, to train the model or to track trends and performance. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“<i>Business users then rapidly train the model, tailoring its output</i> to the exact needs of the business.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts <i>enable teams to respond to breaking issues</i> in an agile way, driving continuous improvement.”).</p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining <i>continuously retrains to discover new and valuable insights</i>.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and <i>people ready to take it through a quick and easy training process</i>.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 14	UiPath Accused Products						
	<div><h3>How does communications mining work?</h3><p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p><table><tr><td><p>1</p><p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p></td><td><p>2</p><p>Common themes and semantic intent are grouped together to provide visibility. This is a first for the enterprise. Historically, sliced insight capabilities would have looked only at channel-specific communications.</p></td><td><p>3</p><p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p></td><td><p>4</p><p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p></td><td><p>5</p><p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct changes.</p></td><td><p>6</p><p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p></td></tr></table><p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p></div> <p>13</p> <p>For another example, UiPath Process Mining refines the search terms based at least in part on the executed query, and to monitor for matches to a refined query, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially <i>works by bringing humans into the automation loop</i> to manage exceptions, issue approvals, and process escalations.”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and <i>establish a cycle of continuous monitoring and improvement</i>”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The <i>result is then used for process discovery, conformance checking, and process enhancement.</i>”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and</p>	<p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p>	<p>2</p> <p>Common themes and semantic intent are grouped together to provide visibility. This is a first for the enterprise. Historically, sliced insight capabilities would have looked only at channel-specific communications.</p>	<p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p>	<p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p>	<p>5</p> <p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct changes.</p>	<p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p>
<p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p>	<p>2</p> <p>Common themes and semantic intent are grouped together to provide visibility. This is a first for the enterprise. Historically, sliced insight capabilities would have looked only at channel-specific communications.</p>	<p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p>	<p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p>	<p>5</p> <p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct changes.</p>	<p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p>		

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 14	UiPath Accused Products
	<p>monitoring with the <i>ability to act on insights with automation</i>. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for <i>controlled access to data</i>. It also <i>allows administrators to establish user roles for broad or very specific functions for groups or individuals</i>.”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to refine the search terms based at least in part on the executed query, and to monitor for matches to a refined query. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Insights refines the search terms based at least in part on the executed query, and to monitor for matches to a refined query, including by exporting the data for analysis. <i>See, e.g.</i>,</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 14	UiPath Accused Products
	<p>https://www.uipath.com/product/rpa-insights (“<i>Export and analyze your Insights data</i> with real-time data export to Splunk, PowerBI, and Elasticsearch.”).</p> <p>For another example, UiPath Test Suite refines the search terms based at least in part on the executed query, and to monitor for matches to a refined query, including by identifying and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and <i>identify test data</i> from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient <i>test data management</i>. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to <i>execute actions within the database</i> such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”)</p> <p>“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically</i> during automated test execution through low-code automation.” <i>Id.</i>; <i>id.</i> (“One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources</i>, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 14	UiPath Accused Products
	<p><i>manage test data</i> tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can <i>efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Action Center refines the search terms based at least in part on the executed query, and to monitor for matches to a refined query, including by alerting the second user to information about processes. <i>See, e.g.</i>, https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.”).</p> <p>For another example, UiPath AI Center refines the search terms based at least in part on the executed query, and to monitor for matches to a refined query, including for use in monitoring and training. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, manage, and <i>improve machine learning models</i>.”); <i>id.</i> (“Continuously <i>improve your models by bringing humans to handle exceptions, validate data and send it for retraining</i>.”; “Constantly train and improve ML models using the <i>human validated data</i>.”); <i>id.</i> (“Manage – <i>Monitor and manage your AI skills</i> ensuring the highest efficiency”).</p> <p>UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, <i>the robot asks AI for a prediction</i>, supplying any required data from the process. When <i>the prediction is returned, the robot acts on the results</i> and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. <i>You can manage your models and track their progress</i>. You can <i>engage with models and validate predictions</i>, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data</i>, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 14	UiPath Accused Products
	<p>higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> (“It’s also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”).</p> <p>For another example, UiPath Attended Robots refine the search terms based at least in part on the executed query, and to monitor for matches to a refined query, including seeking input from human users. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”).</p> <p>“[P]eople and robots work together to accomplish a complex task”; alternatively, “robots will work on a task and loop in their human teammates to handle an exception or make a decision.” UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise”, at 2; <i>id.</i> at 4 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 6 (“a specific action you take triggers a robot to start a task”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Document Understanding refines the search terms based at least in part on the executed query, and to monitor for matches to a refined query, including by asking the second user for validation. <i>See, e.g.,</i> UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can ask for employee validation if needed and will automatically learn from the human validated data.”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 8 (“Whether your documents are structured, semi-structured, or unstructured, UiPath Document Understanding can teach robots to read, analyze, and process your</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 14	UiPath Accused Products
	<p>documents.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 15 (“Communications mining can be an important component in intelligent document processing (IDP). Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”).</p> <p>UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to <i>six people</i>, whose <i>job is to monitor the bots</i>” and “<i>check to make sure that the data being fetched</i> using document understanding is at par.”); <i>id.</i> at 10 (the <i>human team “monitor[s] the processes”</i>); <i>id.</i> at 13 (Document Understanding has the “ability to extract data from documents for <i>use in downstream workflows</i>” and “extract[s] the data into different types”; “<i>Data extraction can pull data from documents and feed it selectively into integrated systems</i>”); <i>id.</i> at 17 (with Document Understanding, “[p]eople can now delegate paperwork to software robots, <i>while robots still go to humans for validation when it’s needed.</i>”); <i>id.</i> at 13:</p> <div> <pre> graph LR subgraph Documents D1[Document 1] D2[Document 2] D3[Document 3] D4[Document 4] end subgraph Systems SA[System A] SB[System B] SC[System C] SD[System D] end DUE[Document Understanding Data Extraction] D1 --> DUE D2 --> DUE D3 --> DUE D4 --> DUE DUE --> SA DUE --> SB DUE --> SC DUE --> SD </pre> </div> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly refine the search terms based at least in part on the executed query, and to monitor for matches to a refined query. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 15	UiPath Accused Products
Claim 15Pre. The apparatus of Claim 11, in which	All versions and implementations of UiPath products practice the apparatus of Claim 11. <i>See</i> Claim 11.
15A. The plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible.	<p>All versions and implementations of UiPath products practice the apparatus of Claim 11, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible. These data sources can be private data sources, open-source data sources, or proprietary data sources. The execution of the query may be done on all available data sources or a subset of data sources. <i>See</i> Claim 6A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining practices the apparatus of Claim 11, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including emails and other communications. <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) (“[S]o what Communications Mining has done <i>is it’s looked through all of those emails, all of those hundred and thirteen thousand emails, and it’s created a cluster of similar looking emails, right, similar looking emails</i> that all have <i>similar wording.</i>”) (emphasis added); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Our LLM consistently and accurately extracts the most important information from <i>masses of communications</i>, and in a way that’s safe and reliable for the enterprise.”); <i>id.</i> (“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from <i>inbound messages</i>: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time <i>view of all service channels</i>—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>Data sources can be, for example, collections of data, such as email accounts, batches, folders or individual emails, any of which can be a data source in UiPath’s accused products. <i>See, e.g.,</i> UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale <i>large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.</i>’”); <i>id.</i> (“convert <i>business communications like emails</i> into structured, machine-readable data. This data is then used for real-time</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 15	UiPath Accused Products
	<p>analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 15	UiPath Accused Products
	<div> <h2>How does communications mining work?</h2> </div> <div> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> </div> <div> <div> <div> <p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> </div> <div> <p>2</p> <p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> </div> <div> <p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> </div> <div> <p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> </div> <div> <p>5</p> <p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> </div> <div> <p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> </div> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div> <p>For another example, UiPath Process Mining practices the apparatus of Claim 11, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including across different systems. <i>See, e.g.,</i> https://www.uipath.com/rpa/what-is-process-mining (“Every enterprise system—like SAP, Salesforce or Oracle—captures event data related to your processes. Process mining reads this data and transforms it into an event log.”); https://www.uipath.com/platform/discover/process-mining (“Analyze the digital footprint of <i>processes across all systems, including SAP, Salesforce, ServiceNow, Oracle, and custom systems.</i>”); https://www.uipath.com/resources/automation-demo/process-mining-demo (Video at 2:10-2:20) (“As a start, my COE has opted to ingest about 410,000 rows of data from 40,000 purchase orders and as we scale process mining in P2P, my app can handle up to a billion rows of data.”); <i>id.</i> (“UiPath Process Mining reads the data in your line of <i>business systems and applications.</i>”).</p> <p>UiPath Process Mining capabilities “include ... <i>data connections available to multiple and/or different databases</i> ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.” UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “<i>end-to-end</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 15	UiPath Accused Products
	<p><i>understanding</i> of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); <i>id.</i> at 10 (“product ensures a single source of truth by centralizing data and dashboard management”); <i>id.</i> at 11 (UiPath Process Mining was used “to evaluate more than 200,000 items, including purchase orders and invoices”). Data sources can be, for example, these various databases and enterprise systems as well as events logs made up of individual data, any of which can be a data source in UiPath’s accused products.</p> <p>For another example, UiPath Task Mining practices the apparatus of Claim 11, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including across variations of a certain task. <i>See, e.g.</i>, https://www.uipath.com/resources/automation-demo/assisted-task-mining-demo (Video at 3:12) (“Gain a full picture of a task by analyzing the variations and merging them into a comprehensive task map”).</p> <p>UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to practice the apparatus of Claim 11, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 15	UiPath Accused Products
	<p>empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite practices the apparatus of Claim 11, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including different applications, databases, websites, or data sets. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data <i>from usage data of your software apps.</i>”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data <i>across different test environments.</i> Its capabilities are designed to <i>handle complex and large data sets</i>, enabling scalable and efficient test data management. UiPath also simplifies <i>test data synchronization through integrated solutions</i> (e.g., UiPath Data Service, UiPath Test Data Queues) <i>to ensure consistency of test data across multiple test environments and teams.</i>”); <i>id.</i> at 5 (“UiPath Database Activities <i>allow you to connect to a range of databases</i>, such as SQL Server, Oracle, DB2, and more, <i>either directly or via ODBC/OLEDB.</i> This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering <i>connectors for external applications via the UiPath Integration Service, as well as API activities</i> (e.g., UiPath Web API Activities) <i>and integrations into Postman.</i> This enables testing teams to <i>leverage external web services</i> (e.g., Mockaroo, Azure OpenAI, OpenAI) <i>and custom web services</i> (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically</i> during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p><i>and unstructured sources, such as websites and files.</i> These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath AI Center practices the apparatus of Claim 11, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including different data and document types. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:30) (“AI Center analyzes PDFs, TIFFs, JPEGs, PNGs, JSON, and CSV and every other data type defined by your models”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (“Our pre-built models help robots understand and work with a wide range of document types, including invoices, receipts, purchase orders, utility bills, passports, and contracts.”); UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick,</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 15	UiPath Accused Products
	<p>efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 7 (“It’s also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Data Service practices the apparatus of Claim 11, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including by combining data sources in order to execute the query. <i>See, e.g.,</i> https://www.uipath.com/product/no-code-data-modeling (“Ditch the data silos, the security concerns, and one-off data schemas. And give developers simple, easy, productive access to the data, variables, and tools they need across the entire UiPath Platform... Integrate easily with any enterprise or legacy system, database, or custom app. Bring that data into a single, scalable, secure place with a drag-and-drop storage interface. Then make it click-simple to bring trustable, fresh, and consistent information into every automation. Seamlessly access and reuse data across multiple automations”).</p> <p>For another example, UiPath Document Understanding practices the apparatus of Claim 11, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including a variety of different documents, document types, and system of documents. <i>See, e.g.,</i> https://www.uipath.com/product/document-understanding (processes “a wide range of documents”); <i>id.</i> (“Document Understanding framework enabling processing different document types and structures using UiPath Studio”); UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, even when the type or format of the document changes”); <i>id.</i> at 8 (“Whether your documents are structured, semi-structured, or unstructured, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills” and unstructured documents with no fixed format such as “various contracts, agreements, emails, disease descriptions,</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

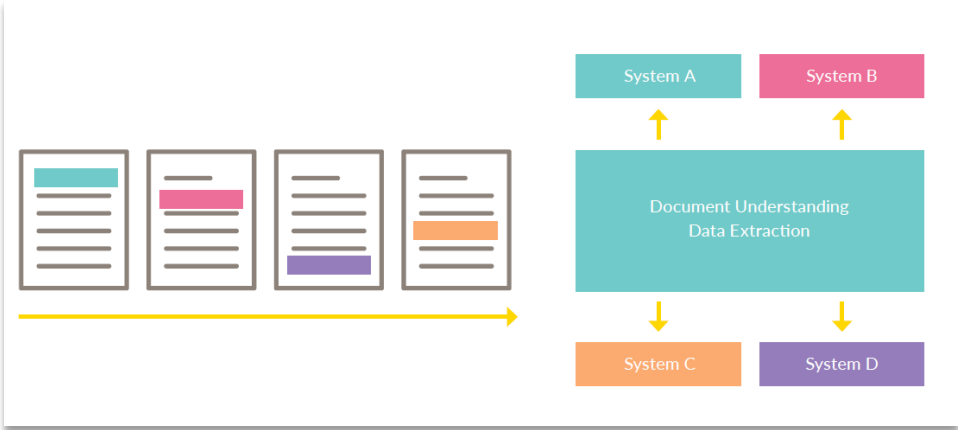
Claim 15	UiPath Accused Products
	<p><i>drug prescriptions, news, voice scripts</i>”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to extract document data from these special cases.”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction can pull data from documents and feed it selectively into integrated systems”); <i>id.</i> at 13:</p>  <p>For another example, UiPath Attended Robots practice the apparatus of Claim 11, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible, including processes, documents, and applications. <i>See, e.g.</i>, https://www.uipath.com/product/attended-automation (“Easily embed automations in each employee’s desktop or web applications with Robot.JS. Use desktop triggers to set up robots that monitor activities behind the scenes and automatically start processes based on user actions.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 15	UiPath Accused Products
	<p>you. UiPath Apps and real-time forms <i>bring in relevant information from a variety of different systems</i>. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly practice the apparatus of Claim 11, in which the plurality of data sources include open-source data sources that are publically available and closed-source data sources that a[re] not publically accessible. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 16	UiPath Accused Products
<p>Claim 16Pre. The apparatus of Claim 11, in which</p>	<p>All versions and implementations of UiPath products practice the apparatus of Claim 11. <i>See</i> Claim 11.</p>
<p>16A. The query is a natural language query, and In which the at least one processor is further configured to translate the query to a system understood language.</p>	<p>All versions and implementations of UiPath products practice the apparatus of Claim 11, in which the query is a natural language query, and in which the at least one processor is further configured to translate the query to a system understood language, such as a Boolean string. <i>See</i> Claim 7A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communication Mining practices the apparatus of Claim 11, in which the query is a natural language query, and in which the at least one processor is further configured to translate the query to a system understood language, including to look for “similar looking emails” with “similar wording” (as examples). <i>See, e.g.</i>, https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) (“[S]o what Communications Mining has done is it’s looked through all of those emails, all of those hundred and thirteen thousand emails, and it’s created a cluster of similar looking emails, right, similar looking emails that all have similar wording.”) (emphasis added); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”).</p> <p>UiPath Communication Mining also practices the apparatus of Claim 11, in which the query is a natural language query, and in which the at least one processor is further configured to translate the query to a system understood language, including to determine intent, sentiment, and emotion included in communications. <i>See, e.g.</i>, https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from inbound messages: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> (“The development team is also enhancing the product’s ability to extract intents—like reasons for contact—from messages, and recognize the relationship between multiple intents and key data points like customer numbers, addresses, and dates.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 16	UiPath Accused Products
	<p>feature uses Generative AI to create a structured output, where <i>each request is a separate ‘extraction’ containing the intent and all associated data.</i>”); <i>id.</i> at 13:</p> <p style="text-align: center;">How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p>  <p>1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> <p>2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> <p>3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> <p>4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> <p>5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> <p>6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> <p>For another example, UiPath Process Mining practices the apparatus of Claim 11, in which the query is a natural language query, and in which the at least one processor is further configured to translate the query to a system understood language, including by adding additional concepts to the initial query. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 7 (uses “existing system data to identify, monitor, and improve business processes” and <i>based on “event-log data, process mining algorithms generate a model that shows the process as it really is,</i> not as it is perceived. <i>Analysis can be enhanced by adding other concepts to the minimal initial data set.</i> The result is then used for process discovery, conformance checking, and process enhancement.”).</p> <p>“In addition, process mining can <i>break down silos of data</i> about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now <i>relate the candidate process to other tasks or processes</i> to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.” UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 16	UiPath Accused Products
	<p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to practice the apparatus of Claim 11, in which the query is a natural language query, and in which the at least one processor is further configured to translate the query to a system understood language. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite practices the apparatus of Claim 11, in which the query is a natural language query, and in which the at least one processor is further configured to translate the query to a system understood language, including identified or generated test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 16	UiPath Accused Products
	<p>are designed to handle <i>complex and large data sets, enabling scalable and efficient test data management</i>. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure <i>consistency of test data across multiple test environments and teams</i>."); <i>id.</i> at 5 ("UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to <i>execute actions within the database such as transactions, queries, or non-queries</i> (e.g., update, insert, delete) <i>to collect, generate, and/or modify test data</i>."); <i>id.</i> ("UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for <i>either retrieving or generating test data dynamically</i> during automated test execution through low-code automation. One of UiPath's core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, <i>specifically tailored to generate authentic and synthetic test data in various formats</i>, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to <i>generate test data, followed by the execution of test sets to ensure streamlined test execution</i>."); <i>id.</i> at 6 (UiPath Test Suite can "<i>parameterize your test with data variables</i> and link it to an external data source so that you can <i>maintain just one automated test to execute multiple data variations</i>. UiPath Studio empowers you to perform Data-Driven Testing by <i>providing integrations with your preferred test data source</i>, whether it's a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data</i> across multiple test environments. The tools offer a <i>centralized, secure, and scalable environment to define custom data models and manage complex data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly manage test data tailored to your testing needs</i>, such as distributed test execution fully integrated into CI/CD pipelines."); <i>id.</i> ("By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or <i>using built-in test data management tools, you can efficiently manage data</i> while minimizing redundancy.").</p> <p>UiPath products including UiPath's "Build/Automate" features also each perform this element.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 16	UiPath Accused Products
	<p>For example, UiPath Attended Robots practice the apparatus of Claim 11, in which the query is a natural language query, and in which the at least one processor is further configured to translate the query to a system understood language, including by taking an action that instructs the robot to expand or share information on the query. <i>See, e.g.</i>, UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 6 (“a specific action you take triggers a robot to start a task”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath AI Center practices the apparatus of Claim 11, in which the query is a natural language query, and in which the at least one processor is further configured to translate the query to a system understood language, including by processing unstructured or structured data. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“It’s also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating</p>

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Claim 16	UiPath Accused Products
	<p>AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. <i>RPA may allow you to process structured documents</i>; adding AI takes the automation even further, <i>making accurate predictions</i> based off automated document processes.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly practice the apparatus of Claim 11, in which the query is a natural language query, and in which the at least one processor is further configured to translate the query to a system understood language. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 17	UiPath Accused Products
<p>Claim 17Pre. The apparatus of Claim 11, in which</p>	<p>All versions and implementations of UiPath products practice the apparatus of Claim 11. <i>See</i> Claim 11.</p>
<p>17A. The plurality of data sources are pre-defined.</p>	<p>All versions and implementations of UiPath products practice the apparatus of Claim 11, in which the plurality of data sources are pre-defined. <i>See</i> Claim 8A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining practices the apparatus of Claim 11, in which the plurality of data sources are pre-defined, including emails and other communications. <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) (“[S]o what Communications Mining has done <i>is it’s looked through all of those emails, all of those hundred and thirteen thousand emails</i>, and it’s created a cluster of similar looking emails, right, similar looking emails that all have similar wording.”) (emphasis added); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Our LLM consistently and accurately extracts the most important information from <i>masses of communications</i>, and in a way that’s safe and reliable for the enterprise.”); <i>id.</i> (“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from <i>inbound messages</i>: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> (“UiPath gives businesses a <i>custom-filtered</i>, real-time <i>view of all service channels</i>—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>Data sources can be, for example, collections of data, such as email accounts, batches, folders or individual emails, any of which can be a data source in UiPath’s accused products. <i>See, e.g.,</i> UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale <i>large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds</i>.”); <i>id.</i> (“convert <i>business communications like emails</i> into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in <i>these messages</i>, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and <i>at scale</i>.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically <i>discover message clusters</i> that reveal repetitive processes, requests and issues. Communications Mining continuously</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

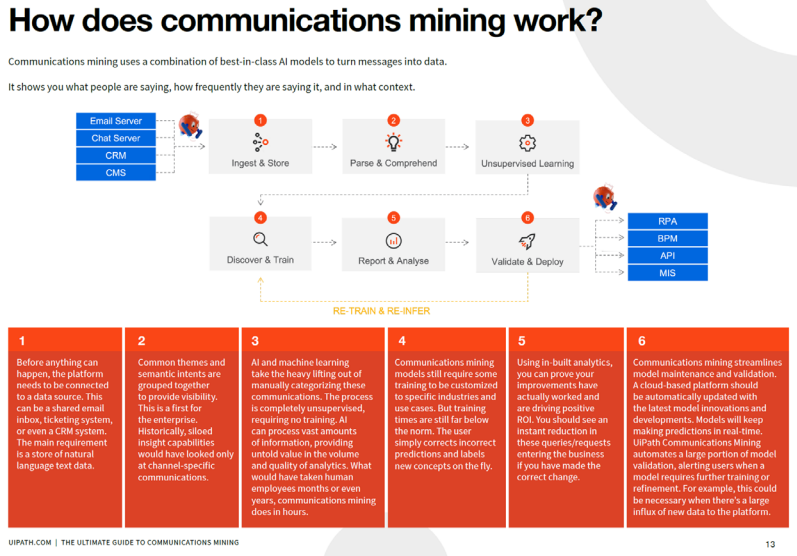
Claim 17	UiPath Accused Products
	<p>retrains to discover new and valuable insights.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p> <p style="text-align: center;">How does communications mining work?</p>  <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <p>1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> <p>2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> <p>3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> <p>4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> <p>5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> <p>6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there’s a large influx of new data to the platform.</p> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> <p>For another example, UiPath Process Mining practices the apparatus of Claim 11, in which the plurality of data sources are pre-defined, including across different systems. <i>See, e.g.,</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 17	UiPath Accused Products
	<p>https://www.uipath.com/rpa/what-is-process-mining (“<i>Every enterprise system—like SAP, Salesforce or Oracle—captures event data related to your processes. Process mining reads this data and transforms it into an event log.</i>”); https://www.uipath.com/platform/discover/process-mining (“Analyze the digital footprint of <i>processes across all systems, including SAP, Salesforce, ServiceNow, Oracle, and custom systems.</i>”); https://www.uipath.com/resources/automation-demo/process-mining-demo (Video at 2:10-2:20) (“As a start, my COE has opted to ingest about <i>410,000 rows of data from 40,000 purchase orders</i> and as we scale process mining in P2P, my app can handle up to a <i>billion rows of data.</i>”); <i>id.</i> (“UiPath Process Mining reads the data in your line of <i>business systems and applications...</i>”).</p> <p>UiPath Process Mining capabilities “include ... <i>data connections available to multiple and/or different databases</i> ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for <i>controlled access to data</i>. It also allows administrators to establish user roles for <i>broad or very specific functions for groups or individuals.</i>” UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “<i>end-to-end understanding</i> of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “<i>existing system data</i> to identify, monitor, and improve business processes” and <i>based on “event-log data</i>, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by <i>adding other concepts to the minimal initial data set</i>. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to <i>any database</i> and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only <i>end-to-end solution</i> that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most <i>comprehensive process understanding solution.</i>”); <i>id.</i> at 10 (“product ensures a single source of truth by <i>centralizing data and dashboard management</i>”); <i>id.</i> at 11 (UiPath Process Mining was used “to evaluate <i>more than 200,000 items, including purchase orders and invoices</i>”). Data sources can be, for example, these various databases and enterprise systems as well as events logs made up of individual data, any of which can be a data source in UiPath’s accused products.</p> <p>For another example, UiPath Task Mining practices the apparatus of Claim 11, in which the plurality of data sources are pre-defined, including across variations of a certain task. <i>See, e.g.,</i> https://www.uipath.com/resources/automation-demo/assisted-task-mining-demo (Video at 3:12) (“Gain a full picture of a task by <i>analyzing the variations and merging them into a comprehensive task map</i>”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 17	UiPath Accused Products
	<p>UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite practices the apparatus of Claim 11, in which the plurality of data sources are pre-defined, including different applications, databases, websites, or data sets. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 17	UiPath Accused Products
	<p><i>environments and teams.”); id. at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); id. (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); id. at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); id. (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</i></p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath AI Center practices the apparatus of Claim 11, in which the plurality of data sources are pre-defined, including different data and document types. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:30) (“AI Center analyzes</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 17	UiPath Accused Products
	<p><i>PDFs, TIFFs, JPEGs, PNGs, JSON, and CSV and every other data type defined by your models</i>”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (“Our pre-built models help robots understand and work with a wide range of document types, including invoices, receipts, purchase orders, utility bills, passports, and contracts.”); UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 7 (“It’s also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Data Service practices the apparatus of Claim 11, in which the plurality of data sources are pre-defined, including by combining data sources in order to execute the query. <i>See, e.g.,</i> https://www.uipath.com/product/no-code-data-modeling (“Ditch the data silos, the security concerns, and one-off data schemas. And give developers simple, easy, productive access to the data, variables, and tools they need across the entire UiPath Platform... Integrate easily with any enterprise or legacy system, database, or custom app. Bring that data into a single, scalable, secure place with a drag-and-drop storage interface. Then make it click-simple to bring trustable, fresh, and consistent information into every automation. Seamlessly access and reuse data across multiple automations”).</p> <p>For another example, UiPath Document Understanding practices the apparatus of Claim 11, in which the plurality of data sources are pre-defined, including a variety of different documents, document types, and system of documents. <i>See, e.g.,</i> https://www.uipath.com/product/document-understanding (processes “a wide range of documents”); <i>id.</i> (“Document Understanding framework enabling processing different document types and structures using UiPath Studio”); UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, even when the type</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 17	UiPath Accused Products
	<p><i>or format of the document changes</i>”); <i>id.</i> at 8 (“Whether your <i>documents are structured, semi-structured, or unstructured</i>, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like <i>tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills</i>” and unstructured documents with no fixed format such as “<i>various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts</i>”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can <i>be paired with our rich ecosystem of partners</i> to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to <i>extract document data from these special cases.</i>”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction <i>can pull data from documents</i> and feed it selectively into integrated systems”); <i>id.</i> at 13:</p> <div> </div> <p>For another example, UiPath Attended Robots practice the apparatus of Claim 11, in which the plurality of data sources are pre-defined, including processes, documents, and applications. <i>See, e.g.</i>, https://www.uipath.com/product/attended-automation (“Easily embed automations in <i>each employee’s desktop or web applications</i> with Robot.JS. Use desktop triggers to set up robots that <i>monitor activities</i> behind the scenes and automatically start processes based on user actions.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 17	UiPath Accused Products
	<p>Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly practice the apparatus of Claim 11, in which the plurality of data sources are pre-defined. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 18	UiPath Accused Products
<p>Claim 18Pre. The apparatus of Claim 11, in which,</p>	<p>All versions and implementations of UiPath products practice the apparatus of Claim 11. <i>See</i> Claim 11.</p>
<p>18A. The at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source.</p>	<p>All versions and implementations of UiPath products practice the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source. This may be performed by data extractors that monitor changes to a data source in real-time. When information at the data sources is updated or located to match the query terms, a data extractor extracts the data to be analyzed. <i>See</i> Claim 9A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining practices the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including real-time monitoring or analysis of emails or other communications. <i>See, e.g.</i>, UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (“convert business communications like emails into structured, machine-readable data. This data is then used <i>for real-time analysis</i> and automation.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a <i>custom-filtered, real-time view of all service channels— extracting the information they care about most</i>. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. <i>Custom, real-time alerts enable teams to respond to breaking issues</i> in an agile way.”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

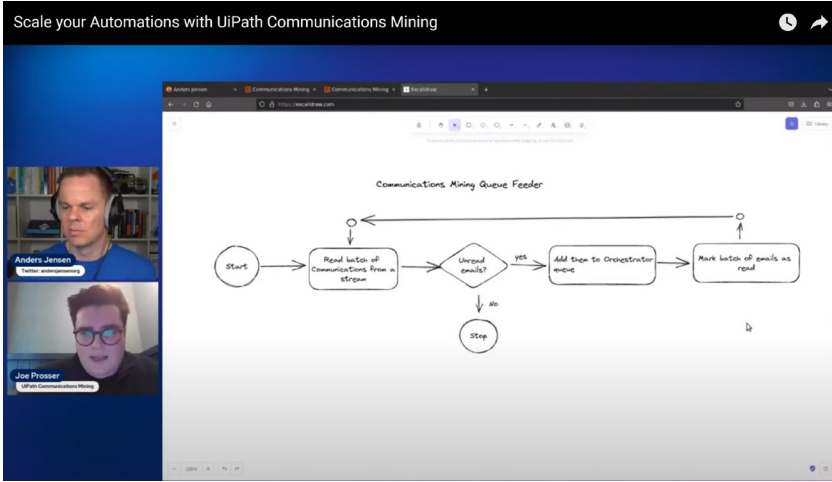
Claim 18	UiPath Accused Products
	<p>How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p>  <div> <div> <p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> </div> <div> <p>2</p> <p>Common themes and semantic intents are grouped together to provide visibility. This is first for the enterprise. Historically, siloed insights capabilities would have looked only at channel-specific communications.</p> </div> <div> <p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> </div> <div> <p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> </div> <div> <p>5</p> <p>Using in-built analytics, you can prove your improvement have actually worked and an driving positive ROI. You should see an instant reduction in these queries requests entering the business if you have made the correct change.</p> </div> <div> <p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> </div> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> <p>See also https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (same; “UiPath gives businesses” this ability, “driving continuous improvement”; explaining how to “[m]onitor your communication”).</p>  <p>https://www.youtube.com/watch?v=Qayl7M8u5AQ</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 18	UiPath Accused Products
	<p>For another example, UiPath Process Mining practices the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including the continuous monitoring of processes to gain “real time insight”. <i>See, e.g.</i>, https://www.uipath.com/product/process-mining (“Continuous monitoring: Continuously adapt to changing conditions with complete and <i>real time insight into how processes are executed and KPI impact</i>.”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining benefits [...] <i>Continuously monitor processes and measure improvements</i>”); <i>id.</i> (“So you’ll <i>have the facts you need to understand, improve, and monitor</i> how things get done... anywhere they’re getting done.”); <i>id.</i> (“<i>Continuously monitors</i> automation performance and ROI”); https://www.uipath.com/platform/discover/process-mining (“Monitor KPIs via dashboards that track processes such as purchase-to-pay, order-to-cash, incident management, and others.”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and <i>establish a cycle of continuous monitoring and improvement</i>”); <i>id.</i> at 7 (uses “existing system data to <i>identify, monitor, and improve business processes</i>” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that <i>tightly integrates process understanding and monitoring with the ability to act on insights with automation</i>. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to practice the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 18	UiPath Accused Products
	<p>processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>For another example, UiPath Automation Hub practices the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, through integration with other UiPath “Discover” features. <i>See, e.g.,</i> https://www.uipath.com/product/automation-hub (“Crowdsource automation ideas or use Process Mining, Task Mining, and Communications Mining for data-driven discovery. Track everything from idea to production in one place—with visibility and control.”).</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Orchestrator practices the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including output of UiPath robots. <i>See, e.g.,</i> https://www.uipath.com/product/orchestrator (“Orchestrator <i>tracks and logs everything every robot does, along with everything people do with robots</i>, so you can keep compliant and secure. Drill-down dashboards and UiPath Insights give you full visibility from deployment to ROI.”).</p> <p>For another example, UiPath Test Suite practices the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including by identifying and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 18	UiPath Accused Products
	<p>3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”)</p> <p>“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation.” <i>Id.</i>; <i>id.</i> (“One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 18	UiPath Accused Products
	<p>UiPath products including UiPath's "Build/Automate" features also each perform this element.</p> <p>For another example, UiPath Action Center practices the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including the monitoring of processes. <i>See, e.g.</i>, UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf ("Benefits of Using Action Center... Monitor and manage processes from a portal.").</p> <p>For another example, UiPath AI Center practices the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including monitoring information and processes in order to act on the data. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure ("Continuously improve your models by bringing humans to handle exceptions, validate data and send it for retraining."); <i>id.</i> ("Constantly train and improve ML models using the human validated data."); <i>id.</i> ("Manage – Monitor and manage your AI skills ensuring the highest efficiency"); UiPath White Paper, "Bringing the Power of AI and RPA Together with AI Center," at 4 ("Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity."); <i>id.</i> at 5 ("AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI."); <i>id.</i> at 6 ("AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time."); <i>id.</i> at 6 ("As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business."); <i>id.</i> at 7 ("Human users validate low-confidence predictions made by the model</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 18	UiPath Accused Products
	<p>and <i>reroute incorrect predictions for retraining</i>. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Attended Robots practice the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including the monitoring of processes and information in real-time. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Use desktop triggers to set up robots that monitor activities behind the scenes and automatically start processes based on user actions.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Document Understanding practices the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source, including monitoring variable parts of documents. <i>See, e.g.,</i> UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, even when the type or format of the document changes”); <i>id.</i> at 6 (“Document data is exported for further use in various systems according to your business needs.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to six people, whose job is to monitor the bots” and “check to make sure that the data being fetched using document understanding is at par.”); <i>id.</i> at 10 (the human team “monitor[s] the processes”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 18	UiPath Accused Products
	These detailed examples are illustrative. All versions and implementations of UiPath products similarly practice the apparatus of Claim 11, in which the at least one processor is further configured to deploy extractors to each of specific data source, a number of extractors being dynamic based at least in part on a traffic volume of each specific data source. This element is in part “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
<p>Claim 19Pre. A computer program product for data analysis, the computer program product comprising: a non-transitory computer-readable medium having program code recorded thereon, the program code comprising:</p>	<p>Plaintiff Rule 14, LLC (“Rule 14” or “Plaintiff”) accuses all versions and implementations of UiPath’s products are a computer program product for data analysis, the computer program product comprising a non-transitory computer-readable medium having program code recorded thereon, which performs one or more elements of the ’977 Patent, including UiPath products that host, integrate, manage, work with, or affect the functionality of other UiPath products. <i>See</i> Claim 1.</p> <p>As an initial matter, all UiPath products (including Automation Cloud, Automation Suite, Solutions Management, Customer Portal, and Standalone) include computer program product comprising a non-transitory computer-readable medium having program code recorded thereon. <i>See, e.g.,</i> https://docs.uipath.com/automation-cloud/automation-cloud/latest/admin-guide/data-residency-cloud (“Automation Cloud services are available in multiple locations worldwide, dispersed across various global regions to offer coverage to our customers around the world.”).</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining analyzes data, including emails and other communications. <i>See, e.g.,</i> https://www.uipath.com/product/communications-mining (“From sending an email to responding to a customer request, every business conversation matters. But processing these communications has always been manual, costly, and inefficient. Until now.”); <i>id.</i> (“UiPath Communications Mining turns every message into actionable data, in real time and on any communications channel.”); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining is a new capability to understand and automate business communications. It uses state-of-the-art AI models to turn business messages—from emails to tickets—into actionable data. It does this in real time and on all major business communications channels.”); <i>id.</i> (“Communications Mining gives businesses insight into previously hidden processes and channels.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.’”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>and valuable insights.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels— extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications— like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 15 (“Communications mining can be an important component in intelligent document processing (IDP). Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<div> <h2>How does communications mining work?</h2> </div> <div> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> </div> <div> <div> <ol style="list-style-type: none"> Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications. AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change. Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. </div> </div> <p>For another example, UiPath Process Mining analyzes data, including business applications data to understand end-to-end processes. <i>See, e.g.</i>, https://www.uipath.com/product/process-mining (“Use the data from your business applications to give you a detailed understanding of complex business processes. You’ll know what to automate, how to improve your processes – and be able to prove impact, too.”); <i>id.</i> (“Process Mining - analyze data from business applications to understand end-to-end processes”); https://www.uipath.com/blog/industry-solutions/how-process-mining-helps-banks-evolve (“Process mining objectively discovers processes. The technology analyzes processes in a very detailed way, providing specific observations and insights for improvement.”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining connects to source systems for a continuous view into how business processes are executed.”); https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“Process mining is a powerful technology that can help businesses gain visibility into their processes. It does this by tracing the digital footprints left behind in systems and applications. Process mining then transforms that raw data into intuitive visualizations of process flows. It makes those complex and wide-ranging processes, like procure-to-pay (P2P) and order-to-cash (O2C), tangible. With thorough and fact-based visualizations, you can spot process bottlenecks, inefficiencies, and risks, at a glance.”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); <i>id.</i> at 10 (“product ensures a single source of truth by centralizing data and dashboard management”); <i>id.</i> at 11 (UiPath Process Mining was used “to evaluate more than 200,000 items, including purchase orders and invoices”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4 (“In addition, process mining can break down silos of data about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now relate the candidate process to other tasks or processes to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.”); <i>id.</i> at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”).</p> <p>For another example, UiPath Task Mining analyzes data, including data regarding employees’ desktop activities to determine improvement opportunities. <i>See, e.g.,</i> https://www.uipath.com/product/task-mining (“Get an objective data-driven picture of as-is processes, quicker and with fewer resources involved.”); <i>id.</i> at Video (analyzing daily task of employees to scale up automations; “the first stage is all about collecting” – automatically collecting and upload data from employees’ computers and then analyzing those findings “by exporting findings into UiPath Studio or as a detailed “Process Definition” document”);</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”); UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 2 (task mining “can capture user actions and metadata, such as keystrokes, mouse clicks, activity screenshots, and other potential system-level activities, performed together on multiple desktops to discover tasks and provide insights into the tasks and activities involved in executing a process. The technology provides a data-based approach to process optimization and automation through different applications and use cases spanning different industries and process areas.”); <i>id.</i> at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining).</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Orchestrator analyzes data, including as the centralized hub to deploy, manage, and govern all the UiPath Robots, both attended and unattended, which function to analyze data by teaching robots new AI skills, including reading documents, recognizing dynamic interfaces and understanding conversations to make complex decisions. https://docs.uipath.com/orchestrator/standalone/2023.4/user-guide/about-robots. <i>See, e.g.,</i> https://www.uipath.com/product/orchestrator (“Orchestrator tracks and logs everything every robot does, along with everything people do with robots, so you can keep compliant and secure.”); https://www.uipath.com/product/attended-automation (“Use desktop triggers to set up robots that monitor activities behind the scenes and automatically start processes based on user actions.”); <i>id.</i> (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>present data to employees and source their input to use it further in the automation process.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 2 (“people and robots work together to accomplish a complex task” or “robots will work on a task and loop in their human teammates to handle an exception or make a decision”; “people and robots work together and share a computer and its resources”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 6 (“a specific action you take triggers a robot to start a task”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Insights analyzes data, including by enabling businesses to track, measure, and manage performance of an automation program. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-insights (“UiPath Insights is an RPA analytics solution that enables your business to track, measure, and manage the performance of your entire automation program—so you can scale your automation journey to the next level.”); <i>id.</i> (“Visualize automation complexity, estimated costs, and benefits of your projects with the Automation Hub integration. Compare estimated vs actual ROI of automation ideas.”); <i>id.</i> (“Measure and report on the performance of document-processing automations with an integration with Document Understanding”); <i>id.</i> (“Situational awareness of your RPA operations is critical to being able to measure and analyze everything from Robot and process performance, to transactions and exceptions. Start with the Robots, Queues, and Processes dashboards to get deeper visibility into your RPA operations.”); <i>id.</i> (“Track and measure automation performance[:] Start out with a library of customizable pre-built dashboard templates to track your robots, queues, and processes. With self-serve analytics, you and your team can measure and forecast the performance of each robot to make informed decisions that reduce errors, maximize usage, and improve efficiency.”).</p> <p>For another example, UiPath Test Suite analyzes data, including test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p> <p>See also https://docs.uipath.com/test-suite/automation-suite/2023.10/user-guide/introduction-test-suite:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

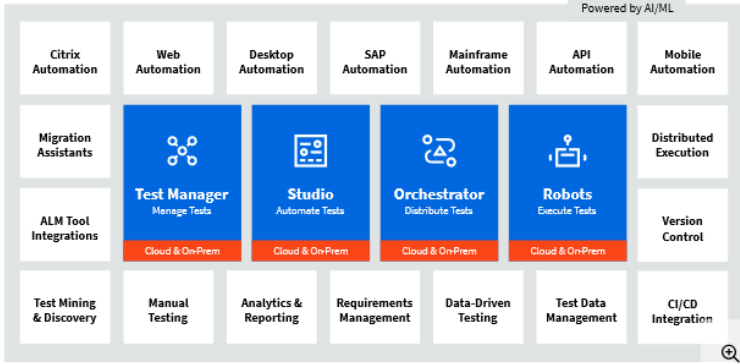
Claim 19	UiPath Accused Products
	<p>In addition, think of UiPath Test Suite as a solution, a suite of 4 tools:</p>  <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath Action Center analyzes data, including by integrating other UiPath products. <i>See, e.g., UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf</i> (“Action Center gives you management tools to monitor processes from start to finish, identify, and resolve resource bottlenecks.”); https://docs.uipath.com/action-center/automation-cloud/latest/user-guide/introduction (“Action Center offers business users a way to handle actionable items, and provide business inputs to Robots”).</p> <p>For another example, UiPath AI Center analyzes data, including by deploying, consuming, managing, and improving machine learning models. <i>See, e.g.,</i> UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, manage, and improve machine learning models.”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:03) (“AI Center has machine learning (ML) automations, including document processing, object detection, text classification, sentiment analysis, entity recognition, anomaly detection, demand forecasting, and more”); https://docs.uipath.com/ai-center/automation-cloud/latest/user-guide/about-ai-center (“AI Center is the infrastructure on top of which UiPath Document Understanding machine learning models run.”). As a particular example, UiPath AI Center uses UiPath Document Understanding to analyze, extract, interpret,</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>and process data, from PDFs, images, handwriting, and scans. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> at 7 (“It’s also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Document Understanding analyzes data, including extracting and processing data from documents of many types. <i>See, e.g.</i>, UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 7 (“The artificial intelligence and document understanding features are very good and have been helpful when it comes to processing handwritten or unstructured [data], especially when there is a high volume and it is repetitive.”); <i>id.</i> at 8 (Document Understanding is “able to read handwriting with 90% to 95% accuracy.”); <i>id.</i> at 11 (“processing the PDF version of an invoice”</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>involves “the capability to scan an invoice and then pick out the required fields, such as the name of the vendor, the details of the products being sent, or the cost of the product”); <i>id.</i> at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction can pull data from documents and feed it selectively into integrated systems”; Figure 2); <i>id.</i> at 15 (Document Understanding has the ability to extract data “in different formats” including native PDFs, scanned PDFs, handwritten invoices or pictures); UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, even when the type or format of the document changes”); <i>id.</i> at 5 (“They can ask for employee validation if needed and will automatically learn from the human validated data.”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> at 6 (“Document data is exported for further use in various systems according to your business needs.”); <i>id.</i> at 7 (“UiPath Document Understanding can use either a rule-based or a model-based approach, or those can be combined into a hybrid approach.”); <i>id.</i> (“A minimum confidence threshold is set for each document or field to define which extractor is optimal for a specific part.”); <i>id.</i> at 8 (“Whether your documents are structured, semi-structured, or unstructured, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills” and unstructured documents with no fixed format such as “various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to extract document data from these special cases.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products are a computer program product for data analysis, the computer program product comprising a non-transitory computer-readable medium having program code recorded thereon, which performs one or more elements of the '977 Patent. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
<p>19A. Program code to generate, via a first user, a query based at least in part on a topic of interest;</p>	<p>All versions and implementations of UiPath products include program code to generate, via a first user, a query based at least in part on a topic of interest. This query may be a natural language query manually generated by a human user or generated from a query generator which may, for example, be based on a robot or AI. <i>See</i> Claim 1A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communication Mining includes program code to generate, via a first user, a query based at least in part on a topic of interest, including, for example, generating a query based on taxonomies, labels wording, filters, or ads. <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 at (34:49-56) (“[S]o the first thing Communications Mining is telling me is can you upload a taxonomy, right? Can you upload a predefined list of labels that you want to look for . . .”); <i>id.</i> at 35:15-35:21 (“[S]o what Communications Mining has done is it’s looked through all of those emails, all of those hundred and thirteen thousand emails, and it’s created a cluster of similar looking emails, right, similar looking emails that all have similar wording.”).</p> <p>“UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”</p> <p>“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from inbound messages: intentions, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.” https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining.</p> <p><i>See also</i> UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is “a new form of enterprise software able to ‘sift and analyze’ at scale large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications monitoring gives managers a custom-filtered, real-time view of all service channels– extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 15 (“Communications mining can be an important component in intelligent document processing (IDP). Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p> <div> <h3>How does communications mining work?</h3> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <ol style="list-style-type: none"> Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, sliced insight capabilities would have looked only at channel-specific communications. AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests if you have made the correct change. Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>For another example, UiPath Process Mining includes program code to generate, via a first user, a query based at least in part on a topic of interest, including by giving “quick insight” into specific process metrics as chosen by the first user or generating a query based on taxonomies, labels wording, filters, or ads. <i>See, e.g.</i>, https://www.uipath.com/resources/automation-demo/process-mining-demo (Video at 1:58+); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”); https://www.uipath.com/product/process-mining (“<i>Use the data from your business applications</i> to give you a detailed understanding of complex business processes. You’ll know what to automate, how to improve your processes – and be able to prove impact, too.”); <i>id.</i> (“Process Mining - <i>analyze data from business applications</i> to understand end-to-end processes”); <i>id.</i> (“<i>Use KPIs</i> to measure the impact automation has on end-to-end processes.”); https://www.uipath.com/blog/industry-solutions/how-process-mining-helps-banks-evolve (“Process mining <i>objectively discovers processes</i>. The technology analyzes processes in a very detailed way, providing specific observations and insights for improvement.”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining <i>connects to source systems</i> for a continuous view into how business processes are executed.”).</p> <p>“Process mining is a powerful technology that can help businesses gain visibility into their processes. It does this by <i>tracing the digital footprints left behind in systems and applications</i>. Process mining then <i>transforms that raw data</i> into intuitive visualizations of process flows. It makes those complex and wide-ranging processes, like procure-to-pay (P2P) and order-to-cash (O2C), tangible. With thorough and fact-based visualizations, you can spot process bottlenecks, inefficiencies, and risks, at a glance.” https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes</p> <p><i>See also</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (<i>uses “existing system data</i> to identify, monitor, and improve business processes” and <i>based on “event-log data</i>, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the <i>minimal initial data set</i>. The <i>result is then used for process discovery</i>, conformance checking, and process enhancement.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4 (“In addition, process mining can <i>break down silos of data</i> about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>and workflows. You can now <i>relate the candidate process to other tasks or processes</i> to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.”).</p> <p>For another example, UiPath Task Mining includes program code to generate, via a first user, a query based at least in part on a topic of interest, including by capturing specific activities based on a specified task. <i>See, e.g., https://www.uipath.com/product/task-mining</i> at Video (UiPath Task Mining involves “[a]nalyzing daily tasks of all the employees”, where <i>the “first stage” is about collecting or “automatically capturing” data</i> about tasks or activities; finally, analyzing those findings “by exporting findings into UiPath Studio or as a detailed “Process Definition” document”); UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface <i>for users to ask/input queries</i> and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining, including “Task discovery and analysis,” such as “Define the to-be process model” and “Ability to allow users to create custom KPIs”); <i>id.</i> at 10 (listing strengths of UiPath Task Mining).</p> <p>UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to include program code to generate, via a first user, a query based at least in part on a topic of interest. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>UiPath products including UiPath's "Manage/Operate" features also each perform this element.</p> <p>For example, UiPath Test Suite i includes program code to generate, via a first user, a query based at least in part on a topic of interest, including test data generated and identified from usage data. UiPath White Paper, "UiPath Test Suite – Test Data Management," at 3 ("To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps."); <i>id.</i> ("UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams."); <i>id.</i> at 5 ("UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data."); <i>id.</i> ("UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath's core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution."); <i>id.</i> at 6 (UiPath Test Suite can "parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it's a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p><i>test data</i> across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Attended Robots include program code to generate, via a first user, a query based at least in part on a topic of interest, including by beginning an action based on information supplied by a user or other robot. <i>See, e.g.</i>, UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can <i>ask your robot coworker</i> to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get <i>information and update other systems for you</i>. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to <i>take action on that information</i> by updating those system[s] on behalf of the user.”); <i>id.</i> at 6 (“<i>a specific action you take</i> triggers a robot to start a task”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>For another example, UiPath AI Center includes program code to generate, via a first user, a query based at least in part on a topic of interest, including by recognizing or predicting patterns in documents and seeking validation of said recognition or prediction. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize <i>patterns in unstructured documents</i> and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, <i>the robot asks AI for a prediction</i>, supplying any required data from the process. When the prediction is returned, the robot acts</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly include program code to generate, via a first user, a query based at least in part on a topic of interest. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p> <p>Rule 14 contends that this limitation is met literally. In the alternative, if not met literally (for example, if a first user is not a human person but instead a computer, AI query generator, or UiPath robot, and that is found not to infringe literally), UiPath accused products also satisfy this limitation under the doctrine of equivalents. Specifically, including program code to generate a query via a first user that is a computer, AI query generator, UiPath robot, or similar, performs substantially the same function as generating the query via a first human user (generation of query based on a topic of interest as determined by user regardless of type), in substantially the same way (via generating the query based on topic of interest or rules relevant to a topic of interest), to yield substantially the same result (completing the steps following query generation as outlined by the claim language) as the narrowed claim limitation.</p>
<p>19B. Program code to expand search terms of the query;</p>	<p>All versions and implementations of UiPath products include program code to expand search terms of the query, for example, based on natural language expansion and/or processing, search lexicons, expanding the search using misspellings, and/or derivations of the topic of interest/sub-topics. The lexicon may, for example, be generated based on user input, automatic word association, synonym/antonym trees, and/or</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>lexicons of positive/negative modifiers. This expansion may be performed by a user and/or may be automated. <i>See</i> Claim 1B.</p> <p>In particular, as illustrative examples, UiPath products including UiPath's "Discover" features each perform this element.</p> <p>For example, UiPath Communication Mining includes program code to expand search terms of the query, including to look for "similar looking emails" with "similar wording" (as examples). <i>See, e.g.</i>, https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) ("[S]o what Communications Mining has done is it's looked through all of those emails, all of those hundred and thirteen thousand emails, and it's created a cluster of similar looking emails, right, similar looking emails that all have similar wording." (emphasis added); UiPath White Paper, "The Ultimate Guide to Communications Mining," at 5 ("Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale."); <i>id.</i> at 7 ("UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.").</p> <p>UiPath Communication Mining also includes program code to expand search terms of the query, including to determine intent, sentiment, and emotion included in communications. <i>See, e.g.</i>, https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining ("UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from inbound messages: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels."); <i>id.</i> ("The development team is also enhancing the product's ability to extract intents—like reasons for contact—from messages, and recognize the relationship between multiple intents and key data points like customer numbers, addresses, and dates."); UiPath White Paper, "The Ultimate Guide to Communications Mining," at 9 ("UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate 'extraction' containing the intent and all associated data."); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<div><h2>How does communications mining work?</h2><p>Communications mining uses a combination of best-in-class AI models to turn messages into data.</p><p>It shows you what people are saying, how frequently they are saying it, and in what context.</p><div><div><p>1</p><p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p></div><div><p>2</p><p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p></div><div><p>3</p><p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p></div><div><p>4</p><p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p></div><div><p>5</p><p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p></div><div><p>6</p><p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p></div></div><p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING</p><p>13</p></div>
	<p>For another example, UiPath Process Mining includes program code to expand search terms of the query, including by adding additional concepts to the initial query. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. <i>Analysis can be enhanced by adding other concepts to the minimal initial data set.</i> The result is then used for process discovery, conformance checking, and process enhancement.”).</p> <p>“In addition, process mining can <i>break down silos of data</i> about how different systems and parts of the organization work and interact. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now <i>relate the candidate process to other tasks or processes</i> to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.” UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to include program code to expand search terms of the query. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”); “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite includes program code to expand search terms of the query, including by retrieving or generating test data dynamically. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 5 (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either <i>retrieving or generating test data dynamically during automated test execution</i> through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities,</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to <i>generate authentic and synthetic test data in various formats</i>, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, <i>these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.</i>"); <i>id.</i> ("UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data."); <i>id.</i> at 6 (UiPath Test Suite can "<i>parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations.</i> UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it's a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments.</i> The tools offer a centralized, secure, and scalable environment to <i>define custom data models and manage complex data structures, such as related and reusable records.</i> These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.").</p> <p>UiPath products including UiPath's "Build/Automate" features also each perform this element.</p> <p>For example, UiPath Attended Robots includes program code to expand search terms of the query, including by taking an action that instructs the robot to expand or share information on the query. <i>See, e.g.,</i> UiPath White Paper, "Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise," at 4 ("Need some information on a client for an upcoming meeting? You can ask your robot coworker <i>to comb through your company's different systems</i> for you to find what you need."); <i>id.</i> at 5 ("the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms <i>bring in relevant information from a variety of different systems.</i> They also allow the user to <i>take action on that information</i> by updating those system[s] on behalf of the user."); <i>id.</i> at 7 ("Multiple robots work together to complete a complex process by <i>sharing information</i> as they work.").</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>For another example, UiPath AI Center includes program code to expand search terms of the query, including by obtaining a prediction related to the query. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, <i>the robot asks AI for a prediction</i>, supplying any required data from the process. <i>When the prediction is returned, the robot acts on the results</i> and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. <i>Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample.</i> But when enhanced with AI, <i>robots can learn to recognize patterns</i> in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 6 (“As your ML models are trained on data, they <i>recognize patterns and make predictions</i>. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, <i>making accurate predictions</i> based off automated document processes.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly include program code to expand search terms of the query as explained above—for example, based on search lexicons, expanding the search using misspellings, and/or derivations of the topic of interest/sub-topics. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>19C. Program code to execute the query on a plurality of data sources;</p>	<p>All versions and implementations of UiPath products include program code to execute the query on a plurality of data sources. These data sources can be private data sources, open-source data sources, or proprietary data sources. The execution of the query may be done on all available data sources or a subset of data sources. <i>See</i> Claim 1C.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>For example, UiPath Communications Mining includes program code to execute the query on a plurality of data sources, including emails and other communications. <i>See, e.g.,</i> https://www.youtube.com/watch?v=jHAjo3jDIF8 (at 35:15-35:21) (“[S]o what Communications Mining has done <i>is it’s looked through all of those emails, all of those hundred and thirteen thousand emails, and it’s created a cluster of similar looking emails, right, similar looking emails</i> that all have <i>similar wording.</i>”) (emphasis added); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Our LLM consistently and accurately extracts the most important information from <i>masses of communications</i>, and in a way that’s safe and reliable for the enterprise.”); <i>id.</i> (“UiPath Communications Mining turns business conversations into actionable insights. It extracts the most important data from <i>inbound messages</i>: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time <i>view of all service channels</i>—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>Data sources can be, for example, collections of data, such as email accounts, batches, folders or individual emails, any of which can be a data source in UiPath’s accused products. <i>See, e.g.,</i> UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale <i>large volumes of communications data from multiple sources such as emails, surveys, tickets and social media feeds.</i>’”); <i>id.</i> (“convert <i>business communications like emails</i> into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and <i>at scale.</i>”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically <i>discover message clusters</i> that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of <i>complex messages, containing multiple different requests.</i> Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like <i>emails tickets and chats</i>—are prevalent. It works best when there’s a <i>high volume of messages</i> passing between colleagues, customers, suppliers, and partners. If there’s a business department with <i>a lot of shared mailboxes and systems</i>, it’s a good candidate for communications mining. If those messages come with <i>PDFs or scanned images</i>, combine a</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

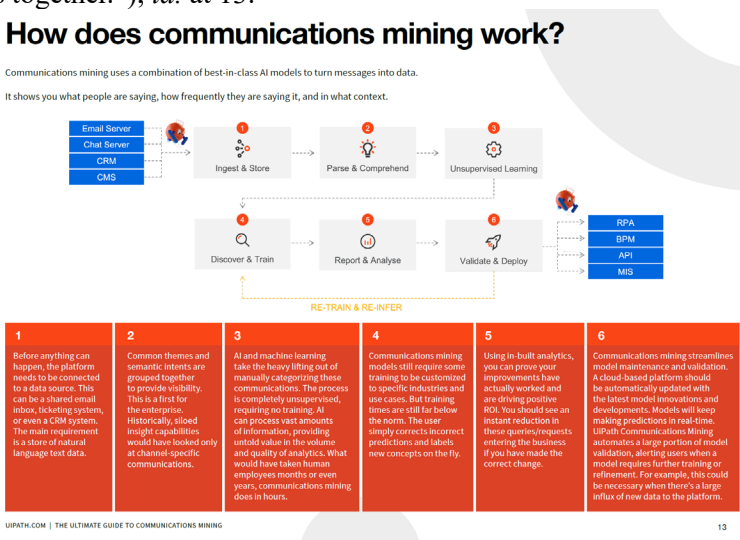
Claim 19	UiPath Accused Products
	<p>communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process.”); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p> <p style="text-align: center;">How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p>  <p>1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> <p>2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, closed insight capabilities would have looked only at channel-specific communications.</p> <p>3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> <p>4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> <p>5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> <p>6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> <p>For another example, UiPath Process Mining includes program code to execute the query on a plurality of data sources, including across different systems. <i>See, e.g.,</i> https://www.uipath.com/rpa/what-is-process-mining (“Every enterprise system—like SAP, Salesforce or Oracle—captures event data related to your processes. Process mining reads this data and transforms it into an event log.”); https://www.uipath.com/platform/discover/process-mining (“Analyze the digital footprint of processes across all systems, including SAP, Salesforce, ServiceNow, Oracle, and custom systems.”); https://www.uipath.com/resources/automation-demo/process-mining-demo (Video at 2:10-2:20) (“As a start, my COE has opted to ingest about 410,000 rows of data from 40,000 purchase orders and as we scale process mining in P2P, my app can handle up to a billion rows of data.”); <i>id.</i> (“UiPath Process Mining reads the data in your line of business systems and applications...”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.” UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”); “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); <i>id.</i> at 10 (“product ensures a single source of truth by centralizing data and dashboard management”); <i>id.</i> at 11 (UiPath Process Mining was used “to evaluate more than 200,000 items, including purchase orders and invoices”). Data sources can be, for example, these various databases and enterprise systems as well as events logs made up of individual data, any of which can be a data source in UiPath’s accused products.</p> <p>For another example, UiPath Task Mining includes program code to execute the query on a plurality of data sources, including across variations of a certain task. <i>See, e.g.</i>, https://www.uipath.com/resources/automation-demo/assisted-task-mining-demo (Video at 3:12) (“Gain a full picture of a task by analyzing the variations and merging them into a comprehensive task map”). UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to perform this element. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”); “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite includes program code to execute the query on a plurality of data sources, including different applications, databases, websites, or data sets. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data <i>from usage data of your software apps.</i>”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data <i>across different test environments.</i> Its capabilities are designed to <i>handle complex and large data sets</i>, enabling scalable and efficient test data management. UiPath also simplifies <i>test data synchronization through integrated solutions</i> (e.g., UiPath Data Service, UiPath Test Data Queues) <i>to ensure consistency of test data across multiple test environments and teams.</i>”); <i>id.</i> at 5 (“UiPath Database Activities <i>allow you to connect to a range of databases</i>, such as SQL Server, Oracle, DB2, and more, <i>either directly or via ODBC/OLEDB.</i> This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering <i>connectors for external applications via the UiPath Integration Service, as well as API activities</i> (e.g., UiPath Web API Activities) <i>and integrations into Postman.</i> This enables testing teams to <i>leverage external web services</i> (e.g., Mockaroo, Azure OpenAI, OpenAI) <i>and custom web services</i> (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to <i>efficiently get data from an array of structured and unstructured sources, such as</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p><i>websites and files</i>. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath AI Center includes program code to execute the query on a plurality of data sources, including different data and document types. <i>See, e.g.</i>, https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:30) (“AI Center analyzes PDFs, TIFFs, JPEGs, PNGs, JSON, and CSV and every other data type defined by your models”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (“Our pre-built models help robots understand and work with a wide range of document types, including invoices, receipts, purchase orders, utility bills, passports, and contracts.”); UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”).</p> <p>For another example, UiPath Data Service includes program code to execute the query on a plurality of data sources, including by combining data sources in order to execute the query. <i>See, e.g.</i>, https://www.uipath.com/product/no-code-data-modeling (“<i>Ditch the data silos</i>, the security concerns, and one-off data schemas. And give developers simple, easy, productive access to the data, variables, and tools they need across the entire UiPath Platform... Integrate easily with any enterprise or legacy system, database, or custom app. Bring that data into a single, scalable, secure place with a drag-and-drop storage interface. Then make it click-simple to bring trustable, fresh, and consistent information into every automation. Seamlessly access and reuse data across multiple automations”).</p> <p>For another example, UiPath Document Understanding includes program code to execute the query on a plurality of data sources, including a variety of different documents, document types, and system of documents. <i>See, e.g.</i>, https://www.uipath.com/product/document-understanding (processes “a <i>wide range of documents</i>”); <i>id.</i> (“Document Understanding framework enabling processing <i>different document types and structures</i> using UiPath Studio”); UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, even when <i>the type or format of the document changes</i>”); <i>id.</i> at 8 (“Whether your <i>documents are structured, semi-structured, or unstructured</i>, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like <i>tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills</i>” and unstructured documents with no fixed format such as “<i>various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts</i>”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to <i>extract document data from these special cases.</i>”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 13 (Document Understanding has the “ability to extract data from documents for use in downstream workflows” and “extract[s] the data into different types”; “Data extraction <i>can pull data from documents</i> and feed it selectively into integrated systems”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

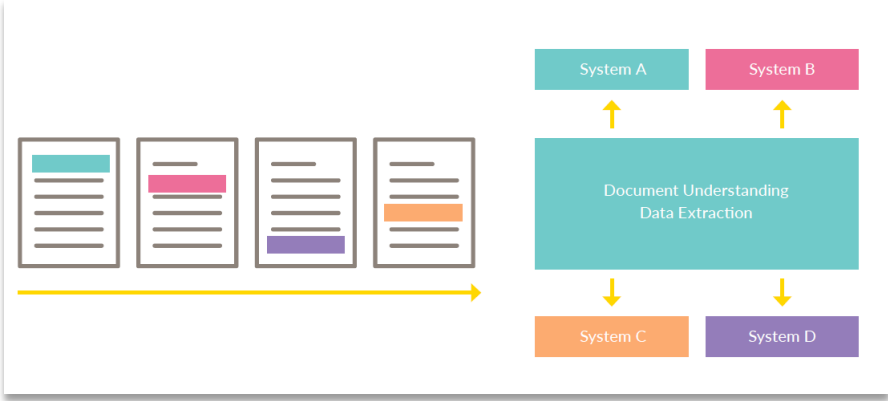
Claim 19	UiPath Accused Products
	 <p>For another example, UiPath Attended Robots include program code to execute the query on a plurality of data sources, including processes, documents, and applications. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Easily embed automations in <i>each employee’s desktop or web applications</i> with Robot.JS. Use desktop triggers to set up robots that <i>monitor activities</i> behind the scenes and automatically start processes based on user actions.”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “<i>log into applications</i>, move files and folders, copy and paste, fill in forms, <i>interact with data, and more</i>”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to <i>comb through your company’s different systems</i> for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms <i>bring in relevant information from a variety of different systems</i>. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly include program code to execute the query on a plurality of data sources. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
19D. Program code to select at least one data source from the	All versions and implementations of UiPath products include program code to select at least one data source from the plurality of data sources, for example the data sources disclosed above, the at least one

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
<p>plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds;</p>	<p>data source being selected when results of the query are greater than or equal to an accuracy thresholds, for example any measurable threshold such as confidence thresholds. <i>See</i> Claim 1D.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communication Mining includes program code to select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by selecting a data source with information that is considered “most relevant” to the query. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath gives businesses a custom-filtered, <i>real-time view of all service channels—extracting the information they care about most</i>. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 5 (“Imagine being able to <i>mine the useful information</i> in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically <i>discover message clusters</i> that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining turns business conversations into actionable insights. It <i>extracts the most important data</i> from inbound messages: intents, reasons for contact, sentiment, and emotion. Communications Mining gives businesses insight into previously hidden processes and channels.”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<div> <h2>How does communications mining work?</h2> </div> <div> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <ol style="list-style-type: none"> 1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, existing system or even a CRM system. The main requirement is a store of natural language text data. 2 Common themes and semantic intents are grouped together to provide insights. This is a first for the enterprise. Historically, cloud insight capabilities would have looked only at channel-specific communications. 3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. 4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. 5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in those quarterly requests entering the business if you have made the correct change. 6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div> <div> <h2>Selecting label confidence thresholds</h2> </div> <div> <h3>Introduction</h3> </div> <div> <p>The platform is typically used in one of the first steps of an automated process: ingesting, interpreting and structuring an inbound communication, such as a customer email, much like a human would do when that email arrived in their inbox.</p> </div> <div> <p>When the platform predicts which labels (or tags) apply to a communication, it assigns each prediction a confidence score (%) to show how confident it is that the label applies.</p> </div> <div> <p>If these predictions are to be used to automatically classify the communication, however, there needs to be a binary decision - i.e. does this label apply or not? This is where confidence thresholds come in.</p> </div> <div> <p>A confidence threshold is the confidence score (%) at or above which an RPA bot or other automation service will take the prediction from the platform as a binary 'Yes, this label does apply' and below which it will take the prediction as a binary 'No, this label does not apply'.</p> </div> <div> <p>https://support.reinforce.io/support/solutions/articles/48001157667-selecting-label-confidence-thresholds</p> </div>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

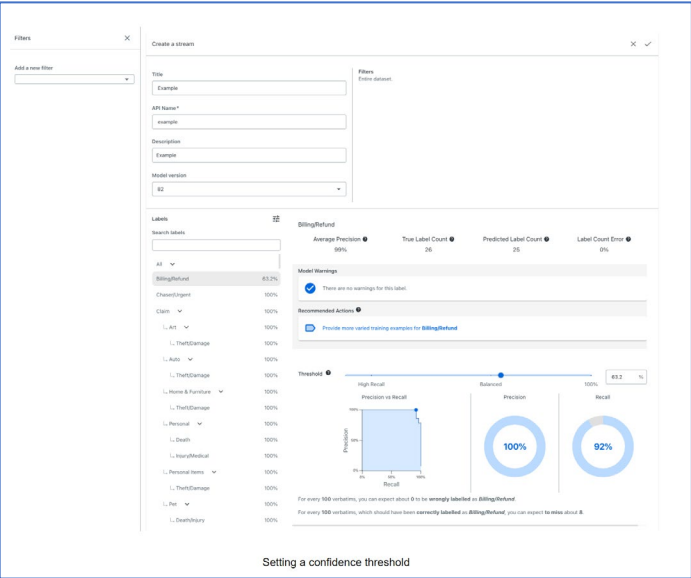
Claim 19	UiPath Accused Products
	<div><p>https://support.reinfer.io/support/solutions/articles/48000982498-create-a-stream</p><div><p>Here you can:</p><ul style="list-style-type: none">• Give the stream a title and a description• Set an API name• Specify the model (labeller) version to use (this is very important)• Use the filters bar on the left-hand-side to set user-property filters which must be satisfied for verbatims to enter the queue for the stream• Select a label and a confidence threshold as per below:</div><p>https://support.reinfer.io/support/solutions/articles/48000982498-create-a-stream</p><p>When UiPath Communications Mining selects a document as a data source, it has selected that data source as meeting the confidence threshold. If no document meets the confidence threshold, Communications Mining does not select that document as a data source.</p></div>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>For another example, UiPath Process Mining includes program code to select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by identifying “valuable” and “impactful” processes. <i>See, e.g.,</i> https://www.uipath.com/rpa/what-is-process-mining (“Identifies the most valuable, impactful places to insert automation”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.”); <i>id.</i> at 11 (UiPath Process Mining was used “to evaluate more than 200,000 items, including purchase orders and invoices”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to include program code to select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Test Suite includes program code to select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by “finding the right data.” UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “<i>parameterize your test with data variables and link it to an external data source</i> so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly manage test data tailored to your testing needs</i>, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can <i>efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath Attended Robots include program code to select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including the data source with the needed information. <i>See, e.g.</i>, UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through <i>your company’s different systems</i> for you <i>to find what you need</i>.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in <i>relevant information from a variety of different systems</i>. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”).</p> <p>For another example, UiPath AI Center includes program code to select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including by validating predictions related to a data source. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. <i>When the prediction is returned, the robot acts on the results and continues the process to completion</i>. The robot is acting as the delivery vehicle of</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

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	<p>AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> (“It’s also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Document Understanding includes program code to select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds, including a confidence threshold for each document or field within a document. <i>See, e.g.</i>, UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 7 (“A minimum confidence threshold is set for each document or field to define which extractor is optimal for a specific part.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly include program code to select at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>19E. Program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored</p>	<p>All versions and implementations of UiPath products include program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof. The monitoring may be performed by data extractors that monitor changes to a data source in real-</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
<p>data that matches the query, newly added data that matches the query, or a combination thereof; and</p>	<p>time. When information at the data sources is updated or located to match the query terms, a data extractor extracts the data to be analyzed. <i>See</i> Claim 1E.</p> <p>In particular, as illustrative examples, UiPath products including UiPath's "Discover" features each perform this element.</p> <p>For example, UiPath Communications Mining includes program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including real-time monitoring of emails or other communications.</p> <p><i>See, e.g.,</i> UiPath White Paper, "The Ultimate Guide to Communications Mining," at 4 ("convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation."); <i>id.</i> at 8 ("Communications Mining's Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service."; "Communications monitoring gives managers a custom-filtered, real-time view of all service channels– extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way."); <i>see also</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (same; "UiPath gives businesses" this ability, "driving continuous improvement"; explaining how to "[m]onitor your communication"); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<div> <h2>How does communications mining work?</h2> </div> <div> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <ol style="list-style-type: none"> Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications. AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change. Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div> <div> <h3>Scale your Automations with UiPath Communications Mining</h3> </div> <div> <p>https://www.youtube.com/watch?v=Qayl7M8u5AQ</p> </div> <div> <p>For another example, UiPath Process Mining includes program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof,</p> </div>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>including the continuous monitoring of processes to gain “real time insight”. <i>See, e.g.</i>, https://www.uipath.com/product/process-mining (“Continuous monitoring: Continuously adapt to changing conditions with complete and real time insight into how processes are executed and KPI impact.”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining benefits [...] Continuously monitor processes and measure improvements”); <i>id.</i> (“So you’ll have the facts you need to understand, improve, and monitor how things get done... anywhere they’re getting done.”); <i>id.</i> (“Continuously monitors automation performance and ROI”); https://www.uipath.com/platform/discover/process-mining (“Monitor KPIs via dashboards that track processes such as purchase-to-pay, order-to-cash, incident management, and others.”); UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to include program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>For another example, UiPath Automation Hub includes program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, through integration with other UiPath “Discover” features. <i>See, e.g.,</i> https://www.uipath.com/product/automation-hub (“Crowdsource automation ideas or use Process Mining, Task Mining, and Communications Mining for data-driven discovery. Track everything from idea to production in one place—with visibility and control.”).</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Orchestrator includes program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including output of UiPath robots. <i>See, e.g.,</i> https://www.uipath.com/product/orchestrator (“Orchestrator <i>tracks and logs everything every robot does, along with everything people do with robots</i>, so you can keep compliant and secure. Drill-down dashboards and UiPath Insights give you full visibility from deployment to ROI.”).</p> <p>For another example, UiPath Test Suite includes program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including by identifying and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and <i>identify test data</i> from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”)</p> <p>“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation.” <i>Id.</i>; <i>id.</i> (“One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>For another example, UiPath Action Center includes program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including the monitoring of processes. <i>See, e.g.,</i> UiPath Action Center Brochure, UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf (“Benefits of Using Action Center... Monitor and manage processes from a portal.”).</p> <p>For another example, UiPath AI Center includes program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including monitoring information and processes in order to act on the data. <i>See, e.g.,</i> UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“Continuously improve your models by bringing humans to handle exceptions, validate data and send it for retraining.”); <i>id.</i> (“Constantly train and improve ML models using the human validated data.”); <i>id.</i> (“Manage – Monitor and manage your AI skills ensuring the highest efficiency”); UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and then accurately process the information within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> at 8 (“RPA brings efficiencies and</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. <i>Your automations can go from reading emails, to sorting and classifying them.</i> RPA may allow you to process structured documents; adding AI takes the automation even further, making accurate predictions based off automated document processes.”).</p> <p>For another example, UiPath Attended Robots include program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including the monitoring of processes and information in real-time. <i>See, e.g., https://www.uipath.com/product/attended-automation</i> (“Use desktop triggers to set up robots that monitor activities behind the scenes <i>and automatically start processes based on user actions.</i>”); UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, <i>interact with data</i>, and more”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and <i>real-time forms bring in relevant information</i> from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information as they work.</i>”).</p> <p>For another example, UiPath Document Understanding includes program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof, including monitoring variable parts of documents. <i>See, e.g.,</i> UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 4 (Document Understanding “automatically determine[s] the location of document data, <i>even when the type or format of the document changes</i>”); <i>id.</i> at 6 (“Document data is <i>exported for further use</i> in various systems according to your business needs.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to six people, whose <i>job is to monitor the bots</i>” and “check to make sure that the <i>data being fetched using document understanding is at par.</i>”); <i>id.</i> at 10 (the human team “<i>monitor[s] the processes</i>”).</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly include program code to monitor, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>19F. Program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source.</p>	<p>All versions and implementations of UiPath products include program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source. A communication channel may be established with specific individuals, other users, and/or another entity such as a robot (both within the client organization and without), and based in part on the analyzed data. <i>See</i> Claim 1F.</p> <p>In particular, after extracting data from the at least one monitored data source via UiPath Communications Mining, all versions and implementations of UiPath products take the information and establish a communication channel with a second user.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining includes program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including to monitor and analyze the extracted data. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Business users then rapidly train the model, tailoring its output to the exact needs of the business.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>“UiPath Robots use the data created by Communications Mining to extend automation into service and conversation-based processes. This allows businesses to automate transactional requests and workflows. Tasks like triaging emails, updating customer information, and case creation are now automated from end to end by UiPath.” <i>Id.</i></p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale large volumes of</p>

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Claim 19	UiPath Accused Products
	<p>communications data from multiple sources such as emails, surveys, tickets and social media feeds.”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then <i>used for real-time analysis and automation.</i>”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, <i>discovering unknown processes, data points and automation opportunities.</i> This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining <i>continuously retrains to discover new and valuable insights.</i>”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”); “Communications monitoring gives managers a custom-filtered, real-time view of all service channels— extracting the information they care about most. Built-in analytics allow managers to <i>track trends, measure service quality and performance at all levels.</i> Custom, real-time alerts enable teams to <i>respond to breaking issues</i> in an agile way.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it’s designed to extract insight from unstructured data—specifically communications data like emails, service requests, and support tickets. <i>It automates conversational business processes;</i> something process mining and task mining can’t do... Each is closely intertwined and works together.”); <i>id.</i> at 13:</p> <p style="text-align: center;">How does communications mining work?</p> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <ol style="list-style-type: none"> 1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. 2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, closed insight capabilities would have looked only at channel-specific communications. 3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. 4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. 5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change. 6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>For another example, UiPath Process Mining includes program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, you can proactively alert someone in UiPath Action Center whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and transform data without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to include program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source. <i>See, e.g.,</i> UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is</p>

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	<p>to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Insights includes program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by exporting the data for analysis. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-insights (“Export and analyze your Insights data with real-time data export to Splunk, PowerBI, and Elasticsearch.”).</p> <p>For another example, UiPath Test Suite includes program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by updating and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate,</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p><i>and/or modify test data.”); id. (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); id. at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex data structures, such as related and reusable records. These capabilities empower you to effortlessly manage test data tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); id. (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can efficiently manage data while minimizing redundancy.”).</i></p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Action Center includes program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by alerting the second user to information about processes. <i>See, e.g., https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, you can proactively alert someone in UiPath Action Center whenever [for instance] the invoice</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.”).</p> <p>For another example, UiPath AI Center includes program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including for use in monitoring and training. <i>See, e.g.,</i> UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, manage, and improve machine learning models.”); <i>id.</i> (“Continuously improve your models by bringing humans to handle exceptions, validate data and send it for retraining.”).</p> <p>UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When the prediction is returned, the robot acts on the results and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are trained on data, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”).</p> <p>For another example, UiPath Attended Robots include program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including seeking input from human users. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”).</p> <p>“[P]eople and robots work together to accomplish a complex task”; alternatively, “robots will work on a task and loop in their human teammates to handle an exception or make a decision.” UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<p>Enterprise”, at 2; <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you <i>to find what you need.</i>”); <i>id.</i> at 5 (“the robot works behind the scenes <i>to get information and update other systems for you.</i> UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also <i>allow the user to take action on that information</i> by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots <i>work together</i> to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Document Understanding includes program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source, including by asking the second user for validation. <i>See, e.g.,</i> UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can <i>ask for employee validation if needed and will automatically learn from the human validated data.</i>”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be <i>paired with our rich ecosystem of partners</i> to meet your needs in unstructured data extraction.”).</p> <p>UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to <i>six people</i>, whose <i>job is to monitor the bots</i>” and “<i>check to make sure that the data being fetched</i> using document understanding is at par.”); <i>id.</i> at 10 (the <i>human team “monitor[s] the processes”</i>); <i>id.</i> at 13 (Document Understanding has the “ability to extract data from documents for <i>use in downstream workflows</i>” and “extract[s] the data into different types”; “Data extraction can pull data from documents and feed it selectively into integrated systems”); <i>id.</i> at 17 (with Document Understanding, “[p]eople can now delegate paperwork to software robots, <i>while robots still go to humans for validation when it’s needed.</i>”); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 19	UiPath Accused Products
	<div> <p>The diagram shows four document icons on the left, each with a colored bar (teal, pink, purple, orange) representing monitored data sources. A yellow arrow points from these sources to a central teal box labeled 'Document Understanding Data Extraction'. From this central box, four yellow arrows point to four separate system boxes: 'System A' (teal), 'System B' (pink), 'System C' (orange), and 'System D' (purple).</p> </div> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly include program code to establish a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
Claim 20 Pre, The computer program of Claim 19, further comprising,	All versions and implementations of UiPath products include the computer program of Claim 19. <i>See</i> Claim 19.
20A. Program code to analyze the extracted data; and	<p>All versions and implementations of UiPath products include program code to analyze the extracted data. <i>See</i> Claim 2A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining includes program code to analyze the extracted data, including data from emails and other communications. <i>See, e.g.,</i> https://www.uipath.com/product/communications-mining (“UiPath Communications Mining turns every message into actionable data, in real time and on any communications channel.”); https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“UiPath Communications Mining is a new capability to understand and automate business communications. It uses state-of-the-art AI models to turn business messages—from emails to tickets—into actionable data. It does this in real time and on all major business communications channels.”).</p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (communications mining is described as “a new form of enterprise software able to ‘sift and analyze at scale large volumes of communications data’ from multiple sources such as emails, surveys, tickets and social media feeds.”); <i>id.</i> (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels— extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>business department with a lot of shared mailboxes and systems, it's a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and <i>people ready to take it through a quick and easy training process.</i>"); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 17 ("Communications mining, process mining, and task mining are complementary but distinct tools... Where Communications Mining differs is that it's <i>designed to extract insight from unstructured data</i>—specifically communications data like emails, service requests, and support tickets. It automates conversational business processes; something process mining and task mining can't do... Each is closely intertwined and works together."); <i>id.</i> at 13:</p> <div> <h3>How does communications mining work?</h3> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <ol style="list-style-type: none"> 1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. 2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications. 3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. 4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. 5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business, if you have made the correct change. 6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div> <p>For another example, UiPath Process Mining includes program code to analyze the extracted data, including business applications data to understand end-to-end processes. <i>See, e.g.,</i> https://www.uipath.com/product/process-mining ("Use the data from your business applications to <i>give you a detailed understanding</i> of complex business processes. You'll know what to automate, how to improve your processes – and be able to prove impact, too."); <i>id.</i> ("Process Mining - <i>analyze data from business applications</i> to understand end-to-end processes"); <a 477="" 519="" 937="" 979"="" data-label="Page-Footer" href="https://www.uipath.com/blog/industry-</p> </td></tr> </table> </div> <div data-bbox="> <p>291 300/321</p> </p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>solutions/how-process-mining-helps-banks-evolve (“Process mining objectively discovers processes. The technology <i>analyzes processes in a very detailed way</i>, providing specific observations and insights for improvement.”); https://www.uipath.com/rpa/what-is-process-mining (“Process mining connects to source systems for a <i>continuous view</i> into how business processes are executed.”).</p> <p>“Process mining is a powerful technology that can help businesses <i>gain visibility</i> into their processes. It does this by tracing the digital footprints left behind in systems and applications. Process mining then <i>transforms that raw data into intuitive visualizations of process flows</i>. It makes those complex and wide-ranging processes, like procure-to-pay (P2P) and order-to-cash (O2C), tangible. With thorough and fact-based visualizations, you can spot process bottlenecks, inefficiencies, and risks, at a glance.” https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes.</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end <i>understanding of processes</i> so they can identify problems, redesign processes when necessary, and establish a cycle of continuous monitoring and improvement”); <i>id.</i> at 7 (<i>uses “existing system data</i> to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. <i>Analysis can be enhanced</i> by adding other concepts to the minimal initial data set. The result is then used for process discovery, conformance checking, and process enhancement.”); <i>id.</i> at 7 (“Connect to any database and <i>transform data</i> without third-party tools.”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly <i>integrates process understanding</i> and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive <i>process understanding</i> solution.”); <i>id.</i> at 11 (UiPath Process Mining was <i>used “to evaluate</i> more than 200,000 items, including purchase orders and invoices”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 4 (“In addition, process mining can <i>break down silos of data about how different systems and parts of the organization work and interact</i>. While the first generation of automation was focused on a single task or process, process mining aggregates data from all these systems and workflows. You can now relate the candidate process to other tasks or processes to create full visibility into end-to-end processes - such as order management or procurement – that span systems and departments.”); <i>id.</i> at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that <i>provides a comprehensive mix of discovery, analysis</i>, and execution capabilities. The goal is</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>to <i>fully understand your processes</i>, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”).</p> <p>For another example, UiPath Task Mining includes program code to analyze the extracted data, including data regarding employees’ desktop activities to determine improvement opportunities. <i>See, e.g.</i>, https://www.uipath.com/product/task-mining (“Get an <i>objective data-driven picture of as-is processes</i>, quicker and with fewer resources involved.”); <i>id.</i> at Video (analyzing daily task of employees to scale up automations; “the first stage is all about collecting” – automatically collecting and upload data from employees’ computers and <i>then analyzing those findings</i> “by exporting findings into UiPath Studio or as a detailed “Process Definition” document”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “<i>Combined with Task Mining</i>, UiPath Process Mining offers the most <i>comprehensive process understanding solution.</i>”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a <i>comprehensive mix of discovery, analysis, and execution capabilities.</i> The goal is to <i>fully understand your processes</i>, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>For example, UiPath Orchestrator includes program code to analyze the extracted data, including as the centralized hub to deploy, manage, and govern all the UiPath Robots, both attended and unattended, which function to analyze data by teaching robots new AI skills, including reading documents, recognizing dynamic interfaces and understanding conversations to make complex decisions. https://docs.uipath.com/orchestrator/standalone/2023.4/user-guide/about-robots. See, e.g., https://www.uipath.com/product/attended-automation (“Use desktop triggers to set up robots that <i>monitor activities behind the scenes</i> and automatically start processes based on user actions.”); <i>id.</i> (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, <i>robots present data to employees and source their input to use it further</i> in the automation process.”).</p> <p>UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise,” at 2 (robots “log into applications, move files and folders, copy and paste, fill in forms, <i>interact with data</i>, and more”); <i>id.</i> at 2 (“people and robots work together to accomplish a complex task” or “<i>robots will work on a task and loop in their human teammates</i> to handle an exception or make a decision”; “people and robots work together and share a computer and its resources”); <i>id.</i> at 4 (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you <i>to find what you need</i>.”); <i>id.</i> at 5 (“the robot works behind the scenes <i>to get information and update other systems</i> for you. UiPath Apps and real-time forms <i>bring in relevant information from a variety of different systems</i>. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>For another example, UiPath Insights includes program code to analyze the extracted data, including by enabling businesses to track, measure, and manage performance of an automation program. See, e.g., https://www.uipath.com/product/rpa-insights (“UiPath Insights is an <i>RPA analytics solution</i> that enables your business to <i>track, measure, and manage the performance of your entire automation program</i>—so you can scale your automation journey to the next level.”); <i>id.</i> (“Visualize automation complexity, estimated costs, and benefits of your projects with the Automation Hub integration. Compare estimated vs actual ROI of automation ideas.”); <i>id.</i> (“<i>Measure and report on the performance</i> of document-processing automations with an integration with Document Understanding”); <i>id.</i> (“<i>Situational awareness of your RPA operations</i> is critical to being able to <i>measure and analyze everything</i> from Robot and process performance, to transactions and exceptions. Start with the Robots, Queues, and Processes dashboards to get deeper visibility into your RPA operations.”); <i>id.</i> (“<i>Track and measure</i> automation performance[:] Start out with a library of customizable pre-built dashboard templates to track your robots, queues, and</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>processes. With <i>self-serve analytics</i>, you and your team can <i>measure and forecast</i> the performance of each robot to make informed decisions that reduce errors, maximize usage, and improve efficiency.”).</p> <p>For another example, UiPath Test Suite includes program code to analyze the extracted data, including test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To <i>help with finding the right data</i>, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to <i>generate and identify test data from usage data of your software apps.</i>”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are <i>designed to handle complex and large data sets, enabling scalable and efficient test data management.</i> UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to <i>execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.</i>”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This <i>enables testing teams to leverage external web services</i> (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) <i>for either retrieving or generating test data dynamically during automated test execution</i> through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, <i>these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.</i>”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that <i>you can maintain just one automated test to execute multiple data variations.</i> UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, <i>data-driven testing</i> not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments.</i> The tools offer a centralized, secure,</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly manage test data tailored to your testing needs</i>, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, <i>you can efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For example, UiPath Action Center includes program code to analyze the extracted data, including by integrating other UiPath products. <i>See, e.g.</i>, UiPath Action Center Brochure, UiPath Action Center Brochure, https://www.uipath.com/hubfs/resources/images/products/studioX/UiPath-Action-Center_Brochure.pdf (“Action Center gives you management tools to monitor processes from start to finish, <i>identify</i>, and resolve resource bottlenecks.”); https://docs.uipath.com/action-center/automation-cloud/latest/user-guide/introduction (“Action Center offers business users <i>a way to handle actionable items</i>, and provide business inputs to Robots”).</p> <p>For another example, UiPath AI Center includes program code to analyze the extracted data, including by deploying, consuming, managing, and improving machine learning models. <i>See, e.g.</i>, UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you <i>orchestrate all moving pieces</i> of AI - deploy, consume, manage, and improve machine learning models.”); https://www.uipath.com/product/rpa-ai-integration-with-ai-center (Video at 1:03) (“AI Center has machine learning (ML) automations, including <i>document processing, object detection, text classification, sentiment analysis, entity recognition, anomaly detection, demand forecasting, and more</i>”); https://docs.uipath.com/ai-center/automation-cloud/latest/user-guide/about-ai-center (“AI Center is the infrastructure on top of which UiPath Document Understanding machine learning models run.”).</p> <p>As a particular example, UiPath AI Center uses UiPath Document Understanding to analyze, extract, interpret, and process data, from PDFs, images, handwriting, and scans. <i>See, e.g.</i>, UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 4 (“Process unstructured data: Information like articles, documents, images, videos, and emails are unstructured. AI enables automatic processing of these documents at scale. Unstructured data is often poorly suited to rules based automations because of the significant differences found from sample to sample. But when enhanced with AI, robots can learn to recognize patterns in unstructured documents and <i>then accurately process the information</i> within them. The result is quick, efficient, and accurate document processing. AI brings RPA to a new level, opening a world of new opportunities for business growth, cost reduction, and improved</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>productivity.”); <i>id.</i> at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, the robot asks AI for a prediction, supplying any required data from the process. When <i>the prediction is returned, the robot acts on the results and continues the process to completion</i>. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. You can manage your models and track their progress. You can engage with models and validate predictions, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data, they recognize patterns and make predictions</i>. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“It’s also important to note that your ML models are best when <i>working with the most relevant data</i>. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”); <i>id.</i> at 8 (“RPA brings efficiencies and increased productivity. Integrating AI allows for automation of more cognitive and complex tasks. Your automations can go from reading emails, to sorting and classifying them. RPA may allow you to <i>process structured documents</i>; adding AI takes the automation even further, <i>making accurate predictions</i> based off automated document processes.”).</p> <p>For another example, UiPath Document Understanding includes program code to analyze the extracted data, including extracting and processing data from documents of many types. <i>See, e.g.</i>, UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 7 (“The artificial intelligence and document understanding features are very good and have been helpful when it comes to <i>processing handwritten or unstructured [data]</i>, especially when there is a high volume and it is repetitive.”); <i>id.</i> at 8 (Document Understanding is “<i>able to read handwriting</i> with 90% to 95% accuracy.”); <i>id.</i> at 11 (“processing the PDF version of an invoice” involves “the capability to scan an invoice and then <i>pick out the required fields</i>, such as the name of the vendor, the details of the products being sent, or the cost of the product”); <i>id.</i> at 13 (Document Understanding has the “<i>ability to extract data from documents for use in downstream workflows</i>” and “<i>extract[s] the data into different types</i>”; “Data extraction can pull data from documents and <i>feed it selectively into integrated systems</i>”); <i>id.</i> at 15 (Document Understanding has the ability to <i>extract data “in different formats”</i> including native PDFs, scanned PDFs, handwritten invoices or pictures).</p> <p>UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can ask for employee validation if needed and will</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p><i>automatically learn from the human validated data.</i>”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> at 6 (“Document data is exported for further use in various systems according to your business needs.”); <i>id.</i> (“A minimum confidence threshold is set for each document or field to define which extractor is optimal for a specific part.”); <i>id.</i> at 8 (“Whether your documents are structured, semi-structured, or unstructured, UiPath Document Understanding can teach robots to read, analyze, and process your documents.”); <i>id.</i> at 8 (“UiPath Document Understanding offers other solutions for processing less structured documents” including structured documents that contain “handwritten text, signatures, checkboxes,” semi-structured documents that contain “fixed and variable parts like tables, invoices, receipts, purchase orders, medical bills, bank statements, utility bills” and unstructured documents with no fixed format such as “various contracts, agreements, emails, disease descriptions, drug prescriptions, news, voice scripts”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 10 (“Some documents turn the difficulty up a notch by featuring handwriting, signatures, checkboxes, tables, or non-Latin alphabet characters. We’re ready for that possibility. UiPath Document Understanding offers solutions that can be used to extract document data from these special cases.”).</p> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly include program code to analyze the extracted data. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>
<p>20B. Program code to receive feedback from the user based at least in part on the established communication channel.</p>	<p>All versions and implementations of UiPath products include program code to receive feedback from the user based at least in part on the established communication channel. A communication channel may be established with specific individuals and/or other users, and/or another entity such as a robot (both within the client organization and without), and based in part on analyzing the extracted data. Users can be human users, computers, AI-generated users, UiPath robots, or other user types. <i>See</i> Claim 2B.</p> <p>In particular, after extracting data from the at least one monitored data source via Communications Mining, all versions and implementations of UiPath products receive feedback from the user based at least in part on the established communication channel.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining include program code to receive feedback from the user based at least in part on the established communication channel, including to monitor and analyze the</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>extracted data. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Business users then rapidly train the model, tailoring its output to the exact needs of the business.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>“UiPath Robots use the data created by Communications Mining to extend automation into service and conversation-based processes. This allows businesses to automate transactional requests and workflows. Tasks like triaging emails, updating customer information, and case creation are now automated from end to end by UiPath.” <i>Id.</i></p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 4 (“convert business communications like emails into structured, machine-readable data. This data is then used for real-time analysis and automation.”); <i>id.</i> at 5 (“Imagine being able to mine the useful information in these messages, discovering unknown processes, data points and automation opportunities. This is what communications mining enables, at speed and at scale.”); <i>id.</i> at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 8 (“Communications Mining’s Quality of Service (QoS) functionality helps to ensure that customers always receive the highest quality of service.”; “Communications monitoring gives managers a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow managers to track trends, measure service quality and performance at all levels. Custom, real-time alerts enable teams to respond to breaking issues in an agile way.”); <i>id.</i> at 9 (“UiPath Communications Mining also enables the end-to-end automation of complex messages, containing multiple different requests. Its Generative Extraction feature uses Generative AI to create a structured output, where each request is a separate ‘extraction’ containing the intent and all associated data.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p><i>people ready to take it through a quick and easy training process.”); id. at 12 (lists various use cases for different industries); id. at 13:</i></p> <div> <h3>How does communications mining work?</h3> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> <ol style="list-style-type: none"> 1 Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data. 2 Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications. 3 AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours. 4 Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly. 5 Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change. 6 Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real-time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform. <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div> <p>For another example, UiPath Process Mining includes program code to receive feedback from the user based at least in part on the established communication channel, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially <i>works by bringing humans into the automation loop</i> to manage exceptions, issue approvals, and process escalations.”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and <i>establish a cycle of continuous monitoring and improvement</i>”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The <i>result is</i></p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p><i>then used for process discovery, conformance checking, and process enhancement.”); id. at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and monitoring with the ability to act on insights with automation. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); id. at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for controlled access to data. It also allows administrators to establish user roles for broad or very specific functions for groups or individuals.”).</i></p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to include program code to receive feedback from the user based at least in part on the established communication channel. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>For example, UiPath Insights includes program code to receive feedback from the user based at least in part on the established communication channel, including by exporting the data for analysis. <i>See, e.g., https://www.uipath.com/product/rpa-insights (“Export and analyze your Insights data with real-time data export to Splunk, PowerBI, and Elasticsearch.”).</i></p> <p>For another example, UiPath Test Suite includes program code to receive feedback from the user based at least in part on the established communication channel, including by updating and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”); <i>id.</i> (“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation. One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution. Furthermore, UiPath Testing Activities provide a comprehensive set of activities, specifically tailored to generate authentic and synthetic test data in various formats, including addresses, randomized dates, names, numbers, and strings. For example, as part of your CI/CD pipeline, these activities can be used to generate test data, followed by the execution of test sets to ensure streamlined test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>for your automated test cases. If you prefer to <i>manage your test data directly</i> within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to <i>seamlessly manage stateful and complex test data across multiple test environments</i>. The tools offer a centralized, secure, and scalable environment to define custom data models and <i>manage complex data structures</i>, such as related and reusable records. These capabilities <i>empower you to effortlessly manage test data</i> tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, <i>you can efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Action Center includes program code to receive feedback from the user based at least in part on the established communication channel, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.”).</p> <p>For another example, UiPath AI Center includes program code to receive feedback from the user based at least in part on the established communication channel, including for use in monitoring and training. <i>See, e.g.,</i> UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, <i>manage, and improve machine learning models</i>.”); <i>id.</i> (“Continuously <i>improve your models by bringing humans to handle exceptions, validate data and send it for retraining</i>.”; “Constantly train and improve ML models using the <i>human validated data</i>.”); <i>id.</i> (“Manage – <i>Monitor and manage your AI skills</i> ensuring the highest efficiency”).</p> <p>UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, <i>the robot asks AI for a prediction</i>, supplying any required data from the process. When <i>the prediction is returned, the robot acts on the results</i> and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>machine learning models. With AI Center, you can easily bring AI to your automations. <i>You can manage your models and track their progress</i>. You can <i>engage with models and validate predictions</i>, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data</i>, they recognize patterns and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“<i>Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining</i>. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”).</p> <p>For another example, UiPath Attended Robots include program code to receive feedback from the user based at least in part on the established communication channel, including seeking input from human users. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, <i>robots present data to employees and source their input to use it further in the automation process</i>.”).</p> <p>“<i>[P]eople and robots work together</i> to accomplish a complex task”; alternatively, “<i>robots will work on a task and loop in their human teammates</i> to handle an exception or make a decision.” UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise”, at 2; <i>id.</i> at 4 (robots “log into applications, move files and folders, copy and paste, fill in forms, <i>interact with data</i>, and more”); <i>id.</i> (“Need some information on a client for an upcoming meeting? <i>You can ask your robot coworker</i> to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“<i>the robot works behind the scenes to get information and update other systems for you</i>. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also <i>allow the user to take action on that information</i> by updating those system[s] <i>on behalf of the user</i>.”); <i>id.</i> at 6 (“a <i>specific action you take triggers a robot</i> to start a task”); <i>id.</i> at 7 (“<i>Multiple robots work together</i> to complete a complex process by <i>sharing information</i> as they work.”).</p> <p>For another example, UiPath Document Understanding includes program code to receive feedback from the user based at least in part on the established communication channel, including by asking the second user for validation. <i>See, e.g.,</i> UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can <i>ask for employee validation if needed and will automatically learn from the human validated data</i>.”; “The more <i>you work with these models</i>, the more trained and accurate they become.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be <i>paired with our rich ecosystem of partners</i> to meet your needs in unstructured data extraction.”); UiPath White Paper, “The Ultimate Guide to</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 20	UiPath Accused Products
	<p>Communications Mining,” at 15 (“Communications mining can be an important component in intelligent document processing (IDP). Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”).</p> <p>UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to <i>six people</i>, whose <i>job is to monitor the bots</i>” and “<i>check to make sure that the data being fetched</i> using document understanding is at par.”); <i>id.</i> at 10 (the <i>human team “monitor[s] the processes”</i>); <i>id.</i> at 13 (Document Understanding has the “ability to extract data from documents for <i>use in downstream workflows</i>” and “extract[s] the data into different types”; “<i>Data extraction can pull data from documents and feed it selectively into integrated systems</i>”); <i>id.</i> at 17 (with Document Understanding, “[p]eople can now delegate paperwork to software robots, <i>while robots still go to humans for validation when it’s needed.</i>”); <i>id.</i> at 13:</p> <div> <pre> graph LR subgraph Documents D1[Document 1] D2[Document 2] D3[Document 3] D4[Document 4] end subgraph Systems SA[System A] SB[System B] SC[System C] SD[System D] end DUE[Document Understanding Data Extraction] D1 --> DUE D2 --> DUE D3 --> DUE D4 --> DUE DUE --> SA DUE --> SB DUE --> SC DUE --> SD </pre> </div> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly include program code to receive feedback from the user based at least in part on the established communication channel. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 21	UiPath Accused Products
Claim 21Pre. The computer program of Claim 19, further comprising,	All versions and implementations of UiPath products include the computer program of Claim 19. <i>See</i> Claim 19.
21A. Program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query.	<p>All versions and implementations of UiPath products include program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query. <i>See</i> Claim 3A.</p> <p>In particular, as illustrative examples, UiPath products including UiPath’s “Discover” features each perform this element.</p> <p>For example, UiPath Communications Mining includes program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query, for example, to train the model or to track trends and performance. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/introducing-uipath-communications-mining (“Business users then rapidly train the model, tailoring its output to the exact needs of the business.”); <i>id.</i> (“UiPath gives businesses a custom-filtered, real-time view of all service channels—extracting the information they care about most. Built-in analytics allow process owners to track trends and measure service quality and performance at all levels. Custom real-time alerts enable teams to respond to breaking issues in an agile way, driving continuous improvement.”).</p> <p>UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 7 (“UiPath Communications Mining uses Specialized AI, in the form of a specially-trained large language model, to automatically discover message clusters that reveal repetitive processes, requests and issues. Communications Mining continuously retrains to discover new and valuable insights.”); <i>id.</i> at 11 (“Communications mining can be deployed anywhere that communications—like emails tickets and chats—are prevalent. It works best when there’s a high volume of messages passing between colleagues, customers, suppliers, and partners. If there’s a business department with a lot of shared mailboxes and systems, it’s a good candidate for communications mining. If those messages come with PDFs or scanned images, combine a communications mining tool with a document understanding solution to automate the process end-to-end. We call this intelligent document processing. All that communications mining needs is a large quantity of unstructured data, and people ready to take it through a quick and easy training process.”); <i>id.</i> at 12 (lists various use cases for different industries); <i>id.</i> at 13:</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 21	UiPath Accused Products
	<div> <h2>How does communications mining work?</h2> </div> <div> <p>Communications mining uses a combination of best-in-class AI models to turn messages into data. It shows you what people are saying, how frequently they are saying it, and in what context.</p> </div> <div> <div> <div> <p>1</p> <p>Before anything can happen, the platform needs to be connected to a data source. This can be a shared email inbox, ticketing system, or even a CRM system. The main requirement is a store of natural language text data.</p> </div> <div> <p>2</p> <p>Common themes and semantic intents are grouped together to provide visibility. This is a first for the enterprise. Historically, siloed insight capabilities would have looked only at channel-specific communications.</p> </div> <div> <p>3</p> <p>AI and machine learning take the heavy lifting out of manually categorizing these communications. The process is completely unsupervised, requiring no training. AI can process vast amounts of information, providing untold value in the volume and quality of analytics. What would have taken human employees months or even years, communications mining does in hours.</p> </div> <div> <p>4</p> <p>Communications mining models still require some training to be customized to specific industries and use cases. But training times are still far below the norm. The user simply corrects incorrect predictions and labels new concepts on the fly.</p> </div> <div> <p>5</p> <p>Using in-built analytics, you can prove your improvements have actually worked and are driving positive ROI. You should see an instant reduction in these queries/requests entering the business if you have made the correct change.</p> </div> <div> <p>6</p> <p>Communications mining streamlines model maintenance and validation. A cloud-based platform should be automatically updated with the latest model innovations and developments. Models will keep making predictions in real time. UiPath Communications Mining automates a large portion of model validation, alerting users when a model requires further training or refinement. For example, this could be necessary when there's a large influx of new data to the platform.</p> </div> </div> <p>UIPATH.COM THE ULTIMATE GUIDE TO COMMUNICATIONS MINING 13</p> </div> <p>For another example, UiPath Process Mining includes program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially <i>works by bringing humans into the automation loop</i> to manage exceptions, issue approvals, and process escalations.”).</p> <p>UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 3 (Process Mining provides “end-to-end understanding of processes so they can identify problems, redesign processes when necessary, and <i>establish a cycle of continuous monitoring and improvement</i>”); <i>id.</i> at 7 (uses “existing system data to identify, monitor, and improve business processes” and based on “event-log data, process mining algorithms generate a model that shows the process as it really is, not as it is perceived. Analysis can be enhanced by adding other concepts to the minimal initial data set. The <i>result is then used for process discovery, conformance checking, and process enhancement.</i>”); <i>id.</i> at 9 (“UiPath Process Mining is the only end-to-end solution that tightly integrates process understanding and</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 21	UiPath Accused Products
	<p>monitoring with the <i>ability to act on insights with automation</i>. This combination of powerful understanding and resulting automation activities provides immense value to businesses.”); <i>id.</i> at 9 (UiPath Process Mining capabilities “include ... data connections available to multiple and/or different databases ... and broad access from modern browsers and operating systems, with authorization mechanisms to allow for <i>controlled access to data</i>. It also <i>allows administrators to establish user roles for broad or very specific functions for groups or individuals</i>.”).</p> <p>For another example, UiPath Task Mining works with other UiPath features, including other UiPath “Discover” features, as well as UiPath “Manage/Operate” or “Build/Automate” features, to include program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query. <i>See, e.g.</i>, UiPath White Paper, “Accelerating RPA with End-to-End Process Understanding and Monitoring,” at 9 (“UiPath Process Mining complements and enhances task mining.”; “Combined with Task Mining, UiPath Process Mining offers the most comprehensive process understanding solution.”); UiPath White Paper, “Powering Successful Automation: How Process Mining is Key to Realizing the Full Potential of RPA,” at 5 (“Combining Process Mining with Task Mining, Task Capture and Automation Hub in a powerful, centralized integrated discovery solution that provides a comprehensive mix of discovery, analysis, and execution capabilities. The goal is to fully understand your processes, delivering accurate inputs and prioritization for your automation program and fostering a cycle of continuous improvement that empowers business agility and aids your strategic objectives, such as digital transformation.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 17 (“Communications mining, process mining, and task mining are complementary but distinct tools.”). <i>See also</i> UiPath White Paper, “Everest Group Task Mining Products PEAK Matrix® Assessment 2023 – Focus on UiPath,” at 3 (UiPath among group that offers “innovative features such as supervised and unsupervised ML algorithms for accurate process discovery, business KPI monitoring, simulation analysis, and improvement opportunity recommendation engine”; UiPath also in the group investing in “Large Language Models (LLMs) to offer a conversational interface for users to ask/input queries and get quicker insights,” as well as “looking to integrate task mining with complementary technologies”); <i>id.</i> at 3-4 (listing capabilities and offerings of task mining); <i>id.</i> at 10 (listing strengths of UiPath Task Mining). The disclosures above regarding UiPath Process Mining generally apply to UiPath Task Mining, and the disclosures regarding UiPath Task Mining to UiPath Process Mining, as well.</p> <p>UiPath products including UiPath’s “Manage/Operate” features also each perform this element.</p> <p>For example, UiPath Insights includes program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query, including by exporting the</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 21	UiPath Accused Products
	<p>data for analysis. <i>See, e.g.,</i> https://www.uipath.com/product/rpa-insights (“Export and analyze your Insights data with real-time data export to Splunk, PowerBI, and Elasticsearch.”).</p> <p>For another example, UiPath Test Suite includes program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query, including by identifying and managing test data. UiPath White Paper, “UiPath Test Suite – Test Data Management,” at 3 (“To help with finding the right data, UiPath provides various AI-powered capabilities (e.g., UiPath Task Capture, UiPath Heatmap, UiPath Integration Service) to generate and identify test data from usage data of your software apps.”); <i>id.</i> (“UiPath enables testers to automate the creation, maintenance, and updating of test data across different test environments. Its capabilities are designed to handle complex and large data sets, enabling scalable and efficient test data management. UiPath also simplifies test data synchronization through integrated solutions (e.g., UiPath Data Service, UiPath Test Data Queues) to ensure consistency of test data across multiple test environments and teams.”); <i>id.</i> at 5 (“UiPath Database Activities allow you to connect to a range of databases, such as SQL Server, Oracle, DB2, and more, either directly or via ODBC/OLEDB. This enables you to execute actions within the database such as transactions, queries, or non-queries (e.g., update, insert, delete) to collect, generate, and/or modify test data.”)</p> <p>“UiPath simplifies API-related test data tasks by offering connectors for external applications via the UiPath Integration Service, as well as API activities (e.g., UiPath Web API Activities) and integrations into Postman. This enables testing teams to leverage external web services (e.g., Mockaroo, Azure OpenAI, OpenAI) and custom web services (e.g., REST, SOAP, GraphQL) for either retrieving or generating test data dynamically during automated test execution through low-code automation.” <i>Id.</i>; <i>id.</i> (“One of UiPath’s core strengths lies in its robust Data Scraping & Extraction activities, designed to efficiently get data from an array of structured and unstructured sources, such as websites and files. These capabilities not only mitigate manual processes, but also reduce errors during the consolidation of test data for automated test execution.”); <i>id.</i> at 6 (UiPath Test Suite can “parameterize your test with data variables and link it to an external data source so that you can maintain just one automated test to execute multiple data variations. UiPath Studio empowers you to perform Data-Driven Testing by providing integrations with your preferred test data source, whether it’s a database, structured file (e.g., Excel, JSON), or even a flat file. All in all, data-driven testing not only reduces redundancies within your test portfolios, but also fosters a modular design for your automated test cases. If you prefer to manage your test data directly within the UiPath Business Automation Platform, UiPath Data Service or UiPath Test Data Queues can be used to seamlessly manage stateful and complex test data across multiple test environments. The tools offer a centralized, secure, and scalable environment to define custom data models and manage complex</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 21	UiPath Accused Products
	<p><i>data structures</i>, such as related and reusable records. These capabilities empower you to <i>effortlessly manage test data</i> tailored to your testing needs, such as distributed test execution fully integrated into CI/CD pipelines.”); <i>id.</i> (“By utilizing data-driven testing features of UiPath Studio and integrating with external data sources or using built-in test data management tools, you can <i>efficiently manage data</i> while minimizing redundancy.”).</p> <p>UiPath products including UiPath’s “Build/Automate” features also each perform this element.</p> <p>For another example, UiPath Action Center includes program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query, including by alerting the second user to information about processes. <i>See, e.g.,</i> https://www.uipath.com/blog/product-and-updates/process-mining-action-center-integration-rapidly-improves-processes (“With the latest integration between UiPath Process Mining and UiPath Action Center, <i>you can proactively alert someone in UiPath Action Center</i> whenever [for instance] the invoice takes longer than two hours to enter. Action Center essentially works by bringing humans into the automation loop to manage exceptions, issue approvals, and process escalations.”).</p> <p>For another example, UiPath AI Center includes program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query, including for use in monitoring and training. <i>See, e.g.,</i> UiPath AI Center Brochure, https://www.uipath.com/resources/automation-brochures/ai-center-brochure (“UiPath AI Center helps you orchestrate all moving pieces of AI - deploy, consume, manage, and <i>improve machine learning models</i>.”); <i>id.</i> (“Continuously <i>improve your models by bringing humans to handle exceptions, validate data and send it for retraining</i>.”; “Constantly train and improve ML models using the <i>human validated data</i>.”); <i>id.</i> (“Manage – <i>Monitor and manage your AI skills</i> ensuring the highest efficiency”).</p> <p>UiPath White Paper, “Bringing the Power of AI and RPA Together with AI Center,” at 5 (“AI Center helps solve the challenge of integration complexity and organizational barriers, putting AI into the right business processes. When AI is added to a specific step in an automation, <i>the robot asks AI for a prediction</i>, supplying any required data from the process. When <i>the prediction is returned, the robot acts on the results</i> and continues the process to completion. The robot is acting as the delivery vehicle of AI.”); <i>id.</i> at 6 (“AI Center helps you orchestrate all moving pieces of AI: deploy, consume, manage, and improve machine learning models. With AI Center, you can easily bring AI to your automations. <i>You can manage your models and track their progress</i>. You can <i>engage with models and validate predictions</i>, increasing model accuracy over time.”); <i>id.</i> at 6 (“As your ML models are <i>trained on data</i>, they recognize patterns</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 21	UiPath Accused Products
	<p>and make predictions. This increases the automation capacity, allows you to automate tasks of much higher complexity and cognitive requirements, leading to improved productivity and efficiency across your business.”); <i>id.</i> at 7 (“Human users validate low-confidence predictions made by the model and reroute incorrect predictions for retraining. This housekeeping helps improve the accuracy of your models, thereby increasing the potential for your automations.”); <i>id.</i> (“It’s also important to note that your ML models are best when working with the most relevant data. The data you used to train your models months or even years ago, is not going to be as valuable as the data you received yesterday. Good data hygiene is important to keep your ML models operating at peak efficiency.”).</p> <p>For another example, UiPath Attended Robots include program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query, including seeking input from human users. <i>See, e.g.,</i> https://www.uipath.com/product/attended-automation (“Enhance human-robot collaboration with custom forms and callouts. Using built-in forms, robots present data to employees and source their input to use it further in the automation process.”).</p> <p>“[P]eople and robots work together to accomplish a complex task”; alternatively, “robots will work on a task and loop in their human teammates to handle an exception or make a decision.” UiPath White Paper, “Attended Automation: How Attended Robots and People Work Together in the Fully Automated Enterprise”, at 2; <i>id.</i> at 4 (robots “log into applications, move files and folders, copy and paste, fill in forms, interact with data, and more”); <i>id.</i> (“Need some information on a client for an upcoming meeting? You can ask your robot coworker to comb through your company’s different systems for you to find what you need.”); <i>id.</i> at 5 (“the robot works behind the scenes to get information and update other systems for you. UiPath Apps and real-time forms bring in relevant information from a variety of different systems. They also allow the user to take action on that information by updating those system[s] on behalf of the user.”); <i>id.</i> at 6 (“a specific action you take triggers a robot to start a task”); <i>id.</i> at 7 (“Multiple robots work together to complete a complex process by sharing information as they work.”).</p> <p>For another example, UiPath Document Understanding includes program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query, including by asking the second user for validation. <i>See, e.g.,</i> UiPath White Paper, “A Guide on Document Understanding; Increase Operational Efficiency and Mitigate Risks with Document Understanding,” at 5 (“They can ask for employee validation if needed and will automatically learn from the human validated data.”; “The more you work with these models, the more trained and accurate they become.”); <i>id.</i> (“For unstructured documents, UiPath Document Understanding can be paired with our rich ecosystem of partners to meet your needs in unstructured data extraction.”); <i>id.</i> at 8 (“Whether your</p>

EXHIBIT A: Infringement Claim Chart for U.S. Patent No. 9,229,977 ('977 Patent)

Claim 21	UiPath Accused Products
	<p>documents are structured, semi-structured, or unstructured, <i>UiPath Document Understanding can teach robots</i> to read, analyze, and process your documents.”); UiPath White Paper, “The Ultimate Guide to Communications Mining,” at 15 (“Communications mining can be an important component in intelligent document processing (IDP). Indeed, UiPath offers a complete IDP solution, combining its Communications Mining and Document Understanding products.”).</p> <p>UiPath White Paper, “5 Ways Document Understanding Can Improve Your Processes,” at 6 (“AI-powered automation with UiPath Document Understanding” has enabled one company “to reduce the team to <i>six people</i>, whose <i>job is to monitor the bots</i>” and “<i>check to make sure that the data being fetched</i> using document understanding is at par.”); <i>id.</i> at 10 (the <i>human team “monitor[s] the processes”</i>); <i>id.</i> at 13 (Document Understanding has the “ability to extract data from documents for <i>use in downstream workflows</i>” and “extract[s] the data into different types”; “<i>Data extraction can pull data from documents and feed it selectively into integrated systems</i>”); <i>id.</i> at 17 (with Document Understanding, “[p]eople can now delegate paperwork to software robots, <i>while robots still go to humans for validation when it’s needed.</i>”); <i>id.</i> at 13:</p> <div> </div> <p>These detailed examples are illustrative. All versions and implementations of UiPath products similarly include program code to refine the search terms based at least in part on the executed query, and program code to monitor for matches to a refined query. This element is “a software limitation” as used in Section 3(a)(i) of the Discovery Order For Patent Cases Assigned To Judge Rodney Gilstrap.</p>