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

PACKET INTELLIGENCE LLC, *Plaintiff*, v. NETSCOUT SYSTEMS, INC., TEKTRONIX COMMUNICATIONS, TEKTRONIX TEXAS, LLC, *Defendants*.	§ § § § § § § § § § §	**CIVIL ACTION NO. 2:16-CV-00230-JRG**

FINDINGS OF FACT AND CONCLUSIONS OF LAW

The Court held a jury trial in this case from October 10, 2017 to October 13, 2017. (Dkt. Nos. 239–240, 241.) Ultimately, the jury found that Defendants had willfully infringed the Asserted Patents, rejected Defendants' invalidity arguments, and awarded $5.75 million in damages. (Dkt. No. 237.)

At Defendants' request, the Court now separately issues the following Findings of Fact ("FF") and Conclusions of Law ("CL") addressing Defendants' Rule 52 Motion of Invalidity of the Asserted Patents under 35 U.S.C. § 101 (Dkt. No. 265) ("the Motion"). After considering the evidence and the Parties' arguments, and for the reasons set forth herein, Defendants' Motion is **DENIED**.

I. FINDINGS OF FACT ("FF")

A. The Parties

[FF1] Plaintiff Packet Intelligence LLC ("Packet Intelligence") is a limited liability company existing under the laws of Texas with its principal place of business at 505 East Travis Street, Suite 209, Marshall, TX 75670. (Dkt. No. 1 at ¶ 1.)

[FF2] Defendant NetScout Systems, Inc. ("NetScout") is a corporation existing under the laws of Delaware with its principal place of business at 310 Littleton Road, Westford, MA 01886-4105. (*Id.* at ¶ 2.)

[FF3] Defendant Tektronix Communications is a wholly owned subsidiary of NetScout. (*Id.* at ¶ 3.)

[FF4] Defendant Tektronix Texas, LLC is a Delaware limited liability company with its principal place of business at 3033 W. President George Bush Highway, Plano, Texas 75075. (*Id.* at ¶ 4.)

B. Procedural History

[FF5] On March 15, 2016, Packet Intelligence sued Defendants NetScout Systems, Inc., Tektronix Communications, and Tektronix Texas, LLC (collectively, "Defendants") alleging infringement of U.S. Patent Nos. 6,651,099 ("the '099 Patent"), 6,665,725 ("the '725 Patent"), 6,771,646 ("the '646 Patent"), 6,839,751 ("the '751 Patent"), and 6,954,789 ("the '789 Patent"). (Dkt. No. 1.)

1. Packet Intelligence Narrows the Asserted Patents and Claims

[FF6] On May 23, 2017, Packet Intelligence dropped all of its claims relating to the '099 Patent and the '646 Patent. (Dkt. No. 132 at 13.)

[FF7] On September 29, 2017, the Court granted Packet Intelligence's request to dismiss all claims and counterclaims relating to the '099 Patent and the '646 Patent from the case based on a lack of subject matter jurisdiction given that these patents were no longer asserted. (Dkt. No. 228 at 12.)

[FF8] At trial, the infringement and invalidity arguments presented to the jury related to Claims 10 and 17 of the '725 Patent, Claims 1 and 5 of the '751 Patent, and Claims 19 and 20 of the '789 Patent (collectively, "the Asserted Patents" or "the Asserted Claims"). *See, e.g.*, (Dkt. No. 244, 10/10/17 A.M. Trial Tr. at 14:20–22.)

2. Defendants Challenge the Asserted Patents under § 101

[FF9] On May 16, 2017, Defendants filed their Answer, in which they argued that the Asserted Patents were "invalid and/or unenforceable" under §§ 101, 102, 103, and 112. (Dkt. No. 14 at ¶ 3.)

[FF10] On September 24, 2017, at the Pretrial Conference in this case, Plaintiff argued that Defendants had waived their § 101 defense by either failing to disclose it or by failing to seasonably assert it. (Dkt. No. 221 at 114:19–23 ("[T]hey've also said that they still have a Section 101 defense, even though the time for that clearly would have been, if not at the motion to dismiss stage, then at the dispositive motion stage, if they thought they had a Section 101 defense.").)

[FF11] In order to address this argument, the Court ordered the Parties to file letter briefs. (*Id.* at 120:11–16.) In their responsive brief, Defendants urged the Court to consider their § 101 defense after trial and "pursuant to [Rule] 52" because "it would be most appropriate for the Court to consider the § 101 defense after it has heard background regarding the patents, including the testimony of expert witnesses." (Dkt. No. 223-1 at 6–7.)

[FF12] After reviewing the Parties' arguments and relevant authorities, the Court concluded that Defendants had properly preserved their § 101 defense. (Dkt. No. 228 at 16 ("[T]he Court finds no reason to conclude that the defense was waived in this case simply for failure to file a motion to dismiss or for summary judgment.").) The Court further ordered the Parties, per Defendants' request, to address the issue of § 101 in post-trial motions under Rule 52. (Dkt. Nos. 228, 256.)

[FF13] Jury selection in this case began on October 2, 2017, with trial commencing on October 10, 2017. (Dkt. Nos. 233, 239.)

[FF14] Ultimately, the jury found that Defendants had willfully infringed the Asserted Patents, rejected Defendants' invalidity arguments, and awarded $5.75 million in damages. (Dkt. No. 237.)

[FF15] After the conclusion of the trial, the Court entered a Post-Verdict Docket Control Order instructing the Parties to address various post-trial issues, including Defendants' invalidity arguments under § 101. (Dkt. No. 243.)

[FF16] Accordingly, Defendants timely filed the instant Motion. (Dkt. No. 265 at 25 ("NetScout respectfully requests the Court grant its motion under Rule 52(c) and invalidate all claims asserted by Plaintiff at trial under 35 U.S.C. § 101.").)

C. Findings of Fact With Respect to Defendants' Motion

1. Overview of the Asserted Patents

[FF17] When information is transmitted over a network like the Internet, the information is generally transmitted via groups of packets that flow from one connection point to another. (Dkt. No. 244, 10/10/17 A.M. Trial Tr. at 51:11–52:13.)

[FF18] This singular flow of packets, from Point A to Point B, is commonly called a "connection flow." *See, e.g.,* '789 Patent 2:41–43 ("The term 'connection flow' is commonly used to describe all the packets involved with a single connection.").

[FF19] Transmitting information over a network often involves transferring packets across multiple connection flows. (Dkt. No. 245, 10/10/17 P.M. Trial Tr. at 108:23–111:12.) For example, an application such as Facebook might transmit pictures and videos via different connection flows even though this content will ultimately be assembled together for display as a single website by a browser. (*Id.*)

[FF20] In measuring the amount or type of information being transmitted by a particular application or protocol, a network monitor needs to measure *all* of the connection flows through which that application or protocol transmits packets. For example, if a network monitor cannot associate the traffic caused by Facebook sending pictures via one connection flow with the traffic caused by Facebook sending videos via another connection flow, the network monitor will have an incomplete view of how much traffic on the network is attributable to Facebook. *See, e.g.,* (Dkt. No. 244, 10/10/2017 A.M. Trial Tr. at 55:23–56:16 ("[T]hat web page that you're using [is] made up of lots of these different connection flows. And the problem is . . . how do I know that that's all related to that one app or . . . web page . . . .").)

[FF21] This is precisely the problem to which the Asserted Patents are directed. '789 Patent at 1:48–51 ("The present invention relates to computer networks, specifically to the real-time elucidation of packets communicated within a data network, including classification according to protocol and application program."); '751 Patent at 3:2–5 ("[P]rior-art systems cannot collect some important performance metrics that are related to a complete sequence of packets of a flow or to several disjointed sequences of the same flow in a network."); '725 Patent at 1:66–2:6 ("Not only should all the packets be detected and analyzed, but for each of these packets the network monitor should determine the protocol (e.g., http, ftp, H.323, VPN, etc.), the application/use within the protocol (e.g., voice, video, data, real-time data, etc.), and an end user's pattern of use within each application or the application context (e.g., options selected, service delivered, duration, time of day, data requested, etc.).").

[FF22] For example, Claim 19 of the '789 Patent recites a process of parsing packets to extract information that can be used to associate packets with a single conversational flow and thus a particular application or protocol.[1] (Dkt. No. 244, 10/10/2017 A.M. Trial Tr. at 57:5–12 ("[W]hat we came up with was a way to take information from all of those different packets in each of those connection flows and create a conversational flow. And the conversational flow, as we see in this picture, can be 3 or 300 or 30 different connection flows, but they're all associated now to that one application, the app on your phone and that web page."); Dkt. No. 245, 10/10/17

[1] This Court previously construed the term "conversational flow" to mean "the sequence of packets that are exchanged in any direction as a result of an activity—for instance, the running of an application on a server as requested by a client—and where some conversational flows involve more than one connection, and some even involve more than one exchange of packets between a client and server." (Dkt. No. 66 at 6.) This construction reflected language agreed to by both Parties at the *Markman* hearing held on March 2, 2017. (*Id.*)

P.M. Trial Tr. at 118:11–15 ("[T]he idea is the packets come in, they're parsed, and you try and associate it with a particular flow.").)

[FF23] Figure 3 depicts this process in more detail:

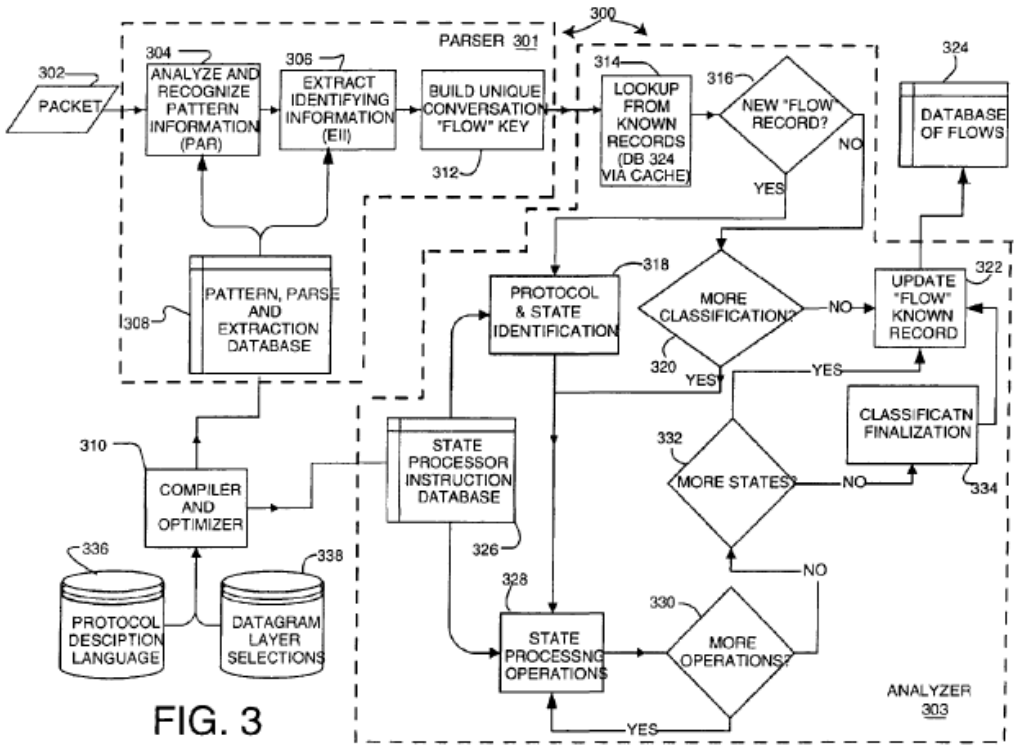

FIG. 3

[FF24] Specifically, the parser subsystem "parses the packet and determines the protocol types and associated headers for each protocol layer," "extracts characteristic portions (signature information) from the packet," and builds a "unique flow signature (also called a 'key')" based on the packet. '789 Patent at 12:19–13:28, 33:30–34:33. Next, the analyzer subsystem determines whether the packet, based on this signature or key, has a corresponding entry in the flow-entry database. *Id.* at 13:60–16:52. If it does, then the flow-entry is updated and, as necessary, additional operations may be performed on the packet to "fully characterize" the associated conversational flow. *Id.* at 14:54–61 ("Updating includes updating one or more statistical measures stored in the flow-entry."), 14:63–15:47 (describing state-based operations carried out

to "finalize[]" the characterization of a particular conversational flow), 16:28–33 ("Once a particular set of state transitions has been traversed for the first time and ends in a final state, a short-cut recognition pattern - a signature - can be generated that will key on every new incoming packet that relates to the conversational flow."). If the packet does not have a corresponding entry, then a new entry is created and "a protocol and state identification process 318 further determines . . . the protocols and where in the state sequence for a flow for this protocol's this packet belongs [sic]." *Id.* at 14:44–53.

[FF25] Claim 20 of the '789 Patent depends from Claim 19, adding the additional limitation that the packet monitor described in Claim 19 accepts packets in real-time. '789 Patent at Claim 20.

[FF26] Claim 10 of the '725 Patent, in part, recites similar steps, including performing certain operations on packets after determining the conversational flow to which they belong. (Dkt. No. 245, 10/10/17 P.M. Trial Tr. at 175:5–10 ("So for the remainder of the wherein limitation, you'll see that it says: Parsing and extracting operations on a packet to extract selected portions of the packet. So for that portion, it's the same kind of evidence that I had pointed to earlier, that the parsing subsystem [of Claim 19 of the '789 Patent] does.").)

[FF27] The same is true for Claim 17 of the '725 Patent, *id.* at 177:20–22 (noting that the language of Claim 10 and Claim 17 are "identical" with respect to all limitations except the wherein clause of Claim 17 and concluding that "the same evidence and methodology . . . can be applied to this one remaining piece of Claim 17 of the '725 patent"), Claim 1 of the '751 Patent, *id.* at 157:16–159:13 (noting that the same evidence of infringement that applied to Claim 19 of

the ’789 Patent applied to Claim 1 of the ’751 Patent because of the similarities between the two claims), and Claim 5 of the ’751 Patent, *id.* at 166:1–20 (same).[2]

2. Improvements Over the Prior Art

[FF28] Network monitors that could recognize various packets as belonging to the same connection flow were well-known in the prior art when the Asserted Patents were filed. *See, e.g.,* ’789 Patent at 2:42–44; (Dkt. No. 245, 10/10/2017 P.M. Trial Tr. at 181:22–182:8.)

[FF29] However, these prior art monitors could not identify disjointed *connection* flows as belonging to the same *conversational* flow. *See, e.g.,* ’789 Patent at 3:56–59 (“What distinguishes this invention from prior art network monitors is that it has the ability to recognize disjointed flows as belonging to the same conversational flow.”); (Dkt. No. 245, 10/10/2017 P.M. Trial Tr. at 189:1–5 (“Q. Would you agree that the prior art does not link, in your opinion, conversation -- connection flows into conversation flows? A. Yes.”); Dkt. No. 248, 10/11/2017 P.M. Trial Tr. at 132:17–138:16; Dkt. No. 250, 10/12/2017 P.M. Trial Tr. at 42:15–48:22.) This inability to associate different connection flows to each other was a crucial limitation in the prior art because applications often transmit data via multiple connection flows. *See* ’751 Patent at 3:2–5 (“[P]rior-art systems cannot collect some important performance metrics that are related to a complete sequence of packets of a flow or to several disjointed sequences of the same flow in a network.”); ’725 Patent at 12:29–33 (explaining that using the disclosed inventions reveals “[w]hat may seem to prior art monitors to be some unassociated flow . . . to be a sub-flow associated with

[2] The Court is mindful that there are important differences between an infringement and invalidity analysis. However, as Packet Intelligence recognized in offering its expert testimony on infringement, there is substantial overlap between the Asserted Patents, at least with respect to the fact that they all relate to a similar problem, the need to associate various connection flows with the same conversational flow, and thus the same underlying application or protocol. Additionally, the Court focuses on Claim 19 of the ’789 Patent because Packet Intelligence has identified this claim as representative of the Asserted Patents. For example, at trial, Packet Intelligence informed the jury that Claim 19 of the ’789 Patent was “exemplary” of the other Asserted Claims. (Dkt. No. 244, 10/10/17 A.M. Trial Tr. at 14:23–25 (“[W]hat I’m putting up on your screen is the – an – an exemplary claim, the Claim 19 of the ’789 Patent.”).)

a previously encountered sub-flow"); '789 Patent at 15:31–34 (same); (Dkt. No. 245, 10/10/2017 P.M. Trial Tr. at 33:10–14 ("Q. And this is the . . . source of the problem that your patent discusses when it says a single activity can result with multiple connections, right? A. Yes, yes. I mean, that was part of the role in the conversational flow.").)

[FF30] By contrast, the Asserted Patents describe how disjointed connection flows can be associated with a single conversational flow to more precisely associate traffic with a particular application or protocol. [FF17–27]; *see also* (Dkt. No. 245 at 12:7–23, 102:12–20 ("[W]hat we're talking about is . . . [i]dentifying the underlying protocols, the applications that are being used, and the user activity that's caused those packets to flow through the network to try and achieve an understanding about how the network is being used.").)

[FF31] Such an application specific view of network traffic is more granular, nuanced, and useful. For example, a network monitor that can identify the underlying application associated with different connection flows can distinguish between network congestion caused by users watching too many videos and congestion caused by users watching too many videos using a particular application. (Dkt. No. 245, 10/10/17 P.M. Trial Tr. at 16:6–17:25, 18:16–18 ("[I]f you now know what these applications are, then you have a greater ability to control and manage your network."), 102:12–20, 112:18–113:1 ("[P]art of why it's important . . . to have this kind of information is for the Internet service providers to be able to measure and analyze their networks. What activity is happening? Is it more than anticipated? Is there a certain application that's come out that's causing congestion?").)

[FF32] The inventions recited by the Asserted Claims, in contrast to the prior art, make this more granular classification possible. *See, e.g.*, '751 Patent at 2:53–56 ("By maintaining statistical measures in the flow-entries related to a conversational flow, embodiments of the present

invention enable specific metrics to be collected in real-time that otherwise would not be possible."); '751 Patent at 3:2–4:6 ("[P]rior-art systems cannot collect some important performance metrics that are related to a complete sequence of packets of a flow or to several disjointed sequences of the same flow in a network . . . In particular, the metrics [made possible by the recited inventions] may be used to monitor and analyze the quality and performance of traffic flows related to a specific set of applications."); '725 Patent at 12:29–33 (explaining that using the disclosed inventions reveals "[w]hat may seem to prior art monitors to be some unassociated flow . . . to be a sub-flow associated with a previously encountered sub-flow"); '789 Patent at 15:31–34 (same); (Dkt. No. 245, 10/10/17 P.M. Trial Tr. at 15:14–17 ("Q. Now, were the probes in the 1997 time frame able to accurately classify the traffic that was coming from these more complicated applications and protocols? A. No, not in the 1998 [sic] time frame."), 16:6–19:3.)

[FF33] In addition to improving network monitors' ability to classify and diagnose network congestion, increased network visibility can also help network providers identify and address intrusions, *i.e.* malicious attacks. (Dkt. No. 245, 10/10/17 P.M. Trial Tr. at 119:25–120:16 ("[P]art of protecting networks from intrusion attacks from people trying to get into servers is – is understanding what the traffic is that's coming over a network. And so being able to classify it, there are certain kinds of attacks that have what are called signatures that when an attack is starting to happen, there will be certain kinds of packets that you can look at or certain patterns. And so based on traffic classification, that's the kind of benefit that you can get from some of the technology in the patent.").)

[FF34] Ultimately, based on the evidence presented in this case, the Court finds that the Asserted Claims offered improvements over the prior art that existed at the time, particularly in light of the limitations of such art. [FF17–33].

[FF35] Similarly, the Court finds that Defendants failed to establish by clear and convincing evidence that the combination of elements recited by the Asserted Claims was conventional, routine, or well-known as compared to the then-existing state of the art and the limitations of such art. [FF17–34].

II. CONCLUSIONS OF LAW

A. Legal Standard

1. Federal Rule of Civil Procedure 52

[CL1] "If a party has been fully heard on an issue . . . the court may enter judgment against the party on a claim or defense that, under the controlling law, can be maintained or defeated only with a favorable finding on that issue." Fed. R. Civ. P. 52(c). Such a judgment "must be supported by findings of fact and conclusions of law." *Id.*

[CL2] The purpose of these findings is to "afford[] . . . a clear understanding of the ground or basis of the decision of the trial court." *S. S. Silberblatt, Inc. v. U.S. for Use & Benefit of Lambert Corp.*, 353 F.2d 545, 549 (5th Cir. 1965) (internal quotation marks omitted); *see also Schlesinger v. Herzog*, 2 F.3d 135, 139 (5th Cir. 1993) (explaining that trial courts need not "recite every piece of evidence" or "sort through the testimony of . . . dozen[s] [of] witnesses").[3]

[CL3] In making a particular finding, the district court "does not . . . draw any inferences in favor of the non-moving party and . . . [instead] make[s] a determination in accordance with its own view of the evidence." *Fairchild v. All Am. Check Cashing, Inc.*, 815

[3] *See Chemlawn Servs. Corp. v. GNC Pumps, Inc.*, 823 F.2d 515, 517 (Fed. Cir. 1987) (procedural aspects of Rule 52 controlled by regional circuit law).

F.3d 959, 964 n.1 (5th Cir. 2016) (internal quotation marks omitted). However, a district court still must arrive at each of its factual determinations based on the applicable burden of proof. *In re Medrano*, 956 F.2d 101, 102 (5th Cir. 1992) (reversing the district court because it applied the preponderance of the evidence standard rather than the clear and convincing standard in making its factual determinations under Rule 52).[4]

2. The § 101 Inquiry

[CL4] Historically, the only statutory conditions for patentability were novelty and utility. *See, e.g., Lyon v. Bausch & Lomb Optical Co.*, 224 F.2d 530, 535 (2d Cir. 1955) (Hand, J.) ("From 1793, when the second patent act was passed, until the Act of 1952, the only statutory standard for invention was that the discovery should be 'new and useful' . . . .").

[CL5] However, in *Hotchkiss v. Greenwood*, 52 U.S. 248, 267 (1850), the Supreme Court concluded "that a patentable invention [must] evidence more ingenuity and skill than that possessed by an ordinary mechanic acquainted with the business." *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 11 (1966) (discussing *Hotchkiss*). This rule became known as the "invention" requirement. *Lyon*, 224 F.2d at 535.

[CL6] Applying the invention requirement, courts began to invalidate patents that merely claimed abstract ideas or phenomena of nature. *See, e.g., Hotel Sec. Checking Co. v. Lorraine Co.*, 160 F. 467, 469 (2d Cir. 1908) (concluding that a patent "cover[ing] simply a system of bookkeeping made applicable to the conditions existing in hotels and restaurants" failed to "rise to the level of invention" because it claimed a "fundamental principle . . . as old as the art of bookkeeping"); *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 131 (1948) ("The Circuit

[4] Here, the relevant burden of proof is clear and convincing evidence. *Berkheimer v. HP Inc.*, No. 2017-1437, 2018 WL 774096, at *5 (Fed. Cir. Feb. 8, 2018) ("Any fact, such as this one, that is pertinent to the invalidity conclusion must be proven by clear and convincing evidence.").

Court of Appeals thought that Bond did much more than discover a law of nature, since he made an [sic] new and different composition of non-inhibitive strains which contributed utility and economy to the manufacture and distribution of commercial inoculants. But we think that that aggregation of species fell short of invention . . . .").

[CL7] Over time, application of the invention requirement became increasingly unpredictable. *Lyon*, 224 F.2d at 535 ("The variants were numberless; and 'invention' became perhaps the most baffling concept in the whole catalogue of judicial efforts to provide postulates for indefinitely varying occasions."); *First Report of the National Patent Planning Commission*, June 18, 1943, H. Doc. 239, 78th Cong. at 10 ("One of the greatest technical weaknesses of the patent system is the lack of a definitive yardstick as to what is invention."); *Efforts to Establish a Statutory Standard of Invention*, Study No. 7, Senate Subcommittee on Patents, Trademarks, and Copyrights, 85th Cong., 1st Sess. (Committee Print, 1958).

[CL8] To "stabiliz[e]" this area of law, Congress codified the invention requirement in § 103. *Graham*, 383 U.S. at 12–13, 15–16.

[CL9] The rule against patents on abstract ideas and laws of nature, however, found a new home in § 101. Thus, cases addressing the invention requirement, such as *Funk Bros.*, were incorporated into § 101 jurisprudence. *See, e.g.*, *Parker v. Flook*, 437 U.S. 584, 593 (1978) ("*Mackay Radio* and *Funk Bros.* point to the proper analysis for this case . . . ."). This severed the rule against patents on abstract ideas and laws of nature from its moorings in the invention requirement, *i.e.* obviousness, yet similar principles were applied under the new § 101 test. For example, *Flook* began by recognizing that natural phenomenon belong to "the prior art." *Id.* at 594 ("Respondent's process is unpatentable under § 101, not because it contains a mathematical algorithm as one component, but because once that algorithm is assumed to be within the prior art,

the application, considered as a whole, contains no patentable invention."). *Flook* then examined whether the claims recited an "inventive concept," *i.e.* an invention, apart from that prior art. *Id.* ("Even though a phenomenon of nature or mathematical formula may be well known, an inventive application of the principle may be patented. Conversely, the discovery of such a phenomenon cannot support a patent unless there is some other inventive concept in its application."); *Diamond v. Diehr*, 450 U.S. 175, 204 (1981) ("Under this procedure, the algorithm is treated for § 101 purposes as though it were a familiar part of the prior art; the claim is then examined to determine whether it discloses 'some other inventive concept.'") (quoting *Flook*, 437 U.S. at 591–592)); *see also Funk Bros.*, 333 U.S. at 132 ("[O]nce nature's secret of the non-inhibitive quality of certain strains of the species of Rhizobium was discovered, the state of the art made the production of a mixed inoculant a simple step . . . That is to say, there is no invention here unless the discovery that certain strains of the several species of these bacteria are non-inhibitive and may thus be safely mixed is invention. But we cannot so hold . . . .").

[CL10] Eventually, the approach taken in *Flook* was distilled into a two-step test for determining whether a patent claims subject matter that is eligible for patent protection.[5] *See Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012); *Alice Corp. Pty. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014).

[5] Despite the similarities between the approach taken in *Funk Bros.* and *Flook*, the Supreme Court has made clear that the § 101 inquiry is distinct from §§ 102 and 103. *See Flook*, 437 U.S. at 595 (criticizing an argument that "confuse[d] the issue of patentable subject matter under § 101 with that of obviousness under § 103"); *Diehr*, 450 U.S. at 191 ("A rejection on either of these grounds does not affect the determination that respondents' claims recited subject matter which was eligible for patent protection under § 101.").

a. Step One

[CL11] The first step of the *Mayo*/*Alice* framework requires a court to determine if the claims are "directed to excluded subject matter." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016).

[CL12] There is no bright line rule that governs this analysis. *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) ("[A] search for a single test or definition in the decided cases concerning § 101 from this court, and indeed from the Supreme Court, reveals that at present there is no such single, succinct, usable definition or test."), *cert. denied*, 138 S. Ct. 469 (2017).

[CL13] However, the approach taken by many courts at the first step of *Mayo*/*Alice* seems to resemble a sort of abstract idea comparison test. Courts refine a representative claim down to some kernel, focus, or gist, and then seek out cases where other courts' distillations of different claims were framed in similar terms and held to be abstract.

[CL14] While the common law tradition has always called on courts to match new facts to old cases, courts addressing § 101 are, perhaps understandably, too often comfortable drawing upon the distillations recited in prior precedent rather than the reasoning, the nuance, and the circumstances discussed in those cases. This has led to several problems.

[CL15] First, courts take different approaches to divining the idea that is apparently embodied in a particular claim. *Compare In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016) ("[I]n determining whether the claims are directed to an abstract idea, we must be careful to avoid oversimplifying the claims because at some level, all inventions embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." (internal quotation marks, brackets, and ellipses omitted)); *Enfish*, 822 F.3d at 1337 ("[D]escribing the

claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule."); *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1345 (Fed. Cir. 2002) ("It is well settled that there is no legally recognizable or protected essential element, gist or heart of the invention . . . Rather, the invention is defined by the claims." (internal citations, quotation marks, and brackets omitted)), *with Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1340 (Fed. Cir. 2017) ("The district court's inquiry centered on determining the 'focus' of the claims, and was thus in accord with our precedent."); *Intellectual Ventures I LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1328 (Fed. Cir. 2017) ("[W]e agree with the district court that the heart of the claimed invention lies in creating and using an index to search for and retrieve data."); *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1150 (Fed. Cir. 2016) ("[T]he Asserted Claims are drawn to the abstract idea of: translating a functional description of a logic circuit into a hardware component description of the logic circuit . . . we believe [this] definition more accurately captures the basic thrust of the Asserted Claims." (internal quotation marks omitted)); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012) ("Dealertrack's claimed process in its simplest form includes three steps: receiving data from one source (step A), selectively forwarding the data (step B, performed according to step D), and forwarding reply data to the first source (step C)."); *Becton, Dickinson & Co. v. Baxter Int'l, Inc.*, 127 F. Supp. 3d 687, 692 (W.D. Tex. 2015) ("After stripping away the technicalisms and superfluous verbiage from the claims' language, it is evident that the gist of the claims, and indeed the entire aim of the patent, involves a pharmacist supervising and verifying the work of a nonpharmacist to ensure the work's accuracy."), *aff'd without opinion*, 639 F. App'x 652 (Fed. Cir. 2016).

[CL16] As a result, it is often the ***propriety of the district court's characterization*** of the claims that becomes the subject of the ensuing appeal. *Compare Enfish*, 822 F.3d at 1337 ("The district court concluded that the claims were directed to the abstract idea of 'storing, organizing, and retrieving memory in a logical table' . . . ."), *with Enfish*, 822 F.3d at 1337 ("However, describing the claims at such a high level of abstraction . . . all but ensures that the exceptions to § 101 swallow the rule.").

[CL17] All of this has led to increasing uncertainty with respect to § 101. *See, e.g.*, *Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1378 (Fed. Cir. 2017) (Linn, J., dissenting in part) ("Despite the number of cases that have faced these questions and attempted to provide practical guidance, great uncertainty yet remains."). Indeed, distilling claims in this way seems to build abstraction into the process of evaluating whether claims are abstract. *See, e.g.*, *id.* (Linn, J., dissenting in part) ("[I]f we are not to re-characterize the claims, what are we supposed to do? Are we not to ignore any limitations? May we ignore some? If so, which ones? Which limitations matter and which do not?").

[CL18] Against this evolving backdrop, the Court simply notes that determining whether certain claims are directed to an unpatentable abstract idea or something else, such as an improvement to computer technology, does not *always* require first restating an oversimplified version of the claim language. Instead, courts can apply general principles articulated by the Supreme Court and Federal Circuit to determine whether the claims themselves are directed to subject matter that is or is not abstract.

[CL19] For example, the Federal Circuit has recognized that "[a]bstraction is avoided or overcome when a proposed new application or computer-implemented function is not simply the generalized use of a computer as a tool to conduct a known or obvious process, but instead is

an improvement to the capability of the system as a whole." *Trading Techs. Int'l, Inc. v. CQG, INC.*, 675 F. App'x 1001, 1005 (Fed. Cir. 2017) (unpublished); *see also Alice*, 134 S. Ct. at 2358 ("[T]he claims in *Diehr* were patent eligible because they improved an existing technological process, not because they were implemented on a computer.").

[CL20] The Federal Circuit has also authored dozens of opinions that help explain why claims may or may not be directed to improvements to computer functionality. One important consideration in these cases has been whether the claims recited "an unconventional technological solution . . . to a technological problem." *See, e.g.*, *Amdocs*, 841 F.3d at 1300–1301.

[CL21] In *Amdocs*, the "unconventional technological solution" involved distributed data gathering, filtering, and enhancing done via a network, which, among other things, helped reduce network congestion. *Amdocs*, 841 F.3d at 1300–1301. This "unconventional technological solution" was patent eligible even though it "involve[d] arguably generic gatherers, network devices, and other components" because these generic components "work[ed] in an unconventional distributed fashion to solve a particular technological problem." *Id.*

[CL22] In *Enfish*, the unconventional technical solution was a particular type of data structure, not "*any* form of storing tabular data, but . . . a *self-referential* table for a computer database." 822 F.3d at 1337 (emphasis in original). In particular, according to the relevant specification, this "self-referential" database functioned differently than conventional, "inferior" databases. *Id.* ("[O]ur conclusion that the claims are directed to an improvement of an existing technology is bolstered by the specification's teachings that the claimed invention achieves other benefits over conventional databases, such as increased flexibility, faster search times, and smaller memory requirements."); *see also Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1305 (Fed. Cir. January 10, 2018) ("[T]he self-referential database found patent eligible in *Enfish* did more

than allow computers to perform familiar tasks with greater speed and efficiency; it actually permitted users to launch and construct databases in a new way.").

[CL23] In *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), the unconventional technical solution involved allowing users to click on third-party ads while still displaying this content on the original host website rather than a separate, third-party website. 773 F.3d at 1257. This prevented the host-website from losing visitors who clicked on an advertisement while still "provid[ing] visitors with the opportunity to purchase products from the third-party merchant without actually entering that merchant's website." *Id.* Although this "store within a store" concept had a clear brick and mortar analog, the Federal Circuit observed that the patent at issue addressed "th[e] challenge of retaining control over the attention of the customer in the context of the Internet." *Id.* at 1258–59. This "challenge" had no clear brick and mortar analog, and neither did the solution offered by the claim at issue. *Id.* Moreover, the fact that the solution was achieved using some conventional steps or components was not dispositive. *Id.*

[CL24] Finally, in *Finjan*, the representative method claim "employ[ed] a new kind of file that enable[ed] a computer security system to do things it could not do before." *Finjan*, 879 F.3d at 1305. In particular, the file allowed virus scanners to build a security profile that could be used to dynamically identify existing and potential threats. *Id.* Thus, the claims recited an improvement to computer functionality because they allowed virus scanners to do something they could not do before. *Id.* at *3–4.

[CL25] By contrast, abstract software claims usually involve implementing well-known concepts or practices using a computer, not as an improvement to the way the computer functions but as a way to simply operationalize the idea itself. This principle is exemplified by *Alice, Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass'n*, 776 F.3d 1343, 1347 (Fed. Cir.

2014), and *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1313 (Fed. Cir. 2016), among others.

[CL26] In *Alice*, the claims recited "the concept of intermediated settlement" as carried out by a computer program. 134 S. Ct. at 2356–57. As the Supreme Court explained, the need addressed by these claims had been recognized for more than a century. *Id.* The solution presented by the claims had been around just as long. *Id.* What the claims recited, then, was simply a way to operationalize a known solution to an existing problem using a computer. *Id.* Allowing a patent for this sort of combination would, according to the Supreme Court, essentially confer a patent on the idea itself, pre-empting any other use. *Alice*, 134 S. Ct. at 2358 ("[I]f a patent's recitation of a computer amounts to a mere instruction to implement an abstract idea on a computer, that addition cannot impart patent eligibility. This conclusion accords with the pre-emption concern that undergirds our § 101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of additional feature that provides any practical assurance that the process is more than a drafting effort designed to monopolize the abstract idea itself." (internal citations, quotation marks, ellipses, and brackets ommitted)).

[CL27] *Content Extraction* makes a similar point. The relevant claim in that case recited a method for scanning documents so that some information about the documents was digitally identified and stored. *Content Extraction*, 776 F.3d at 1345. The Federal Circuit recognized that neither the solution offered by the relevant claim nor the need to which it was addressed were rooted in technology. *Id.* at 1347. Instead, the claims merely recited functions that "humans ha[d] always performed." *Id.* ("[B]anks have, for some time, reviewed checks, recognized relevant data such as the amount, account number, and identity of account holder, and stored that information in their records."). Thus, the claims were ineligible because the addition

of conventional components did not recite something more than the abstract idea itself. *Id.* at 1347–48; *Alice*, 134 S. Ct. at 2358–59 (cautioning against allowing an applicant to "claim any principle of the physical or social sciences by reciting a computer system configured to implement the relevant concept").

[CL28] Likewise, in *Symantec*, the representative claim at issue recited the steps of receiving and filtering e-mail messages. 838 F.3d at 1313. Again, as in *Alice* and *Content Extraction*, not only did this invention have a clear analog, but that analog evidenced that the need addressed by the invention was not technical or new. *Id.* at 1314. Thus, the proffered solution simply performed with a computer what many people had performed in their minds. *Id.* at 1314 ("[I]t was long-prevalent practice for people receiving paper mail to look at an envelope and discard certain letters, without opening them, from sources from which they did not wish to receive mail based on characteristics of the mail.").

[CL29] Together, these cases define a category of inventions that are not necessarily abstract, *i.e.* improvements to computer technology. These cases also set forth general principles that can help determine whether particular claims are directed to an abstract idea or not. Moreover, these general principles flow from the circumstances addressed by prior opinions and the analyses provided therein, not from perceived similarities between an abstracted version of asserted claims and the gist, heart, focus, or thrust of previously invalidated inventions.

[CL30] Accordingly, the Court draws on these same principles in its analysis in this case.

b. Step Two

[CL31] If claims are directed to ineligible subject matter, then a court next "search[es] for an 'inventive concept,' or some element or combination of elements sufficient to ensure that the claim in practice amounts to 'significantly more' than a patent on an ineligible concept." *DDR Holdings*, 773 F.3d at 1255; *see also Bascom Glob. Internet Servs., Inc. v. AT & T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016) ("[A]n inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.").

[CL32] The defendant bears the burden under this step to establish by clear and convincing evidence that the Asserted Claims lack an inventive concept. *Berkheimer*, No. 2017-1437, 2018 WL 774096, at *5 ("The question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact. Any fact, such as this one, that is pertinent to the invalidity conclusion must be proven by clear and convincing evidence.").

[CL33] At times, the inventive concept inquiry may "overlap" with other validity inquiries, including obviousness.[6] *Mayo*, 566 U.S. at 90; *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1347 (Fed. Cir. 2015) ("[P]recedent illustrates that pragmatic analysis of § 101 is facilitated by considerations analogous to those of §§ 102 and 103 as applied to the particular case."); *Trading Techs.*, 675 F. App'x at 1005–06 ("[T]he public interest in innovative advance is best served when close questions of eligibility are considered along with the understanding flowing from review of the patentability criteria of novelty, unobviousness, and enablement . . . .").

[6] Indeed, as explained above, [CL4–CL10], the "inventive concept" inquiry originating from *Flook* and the statutory defense of obviousness have significant historical and analytical overlap. *See Flook*, 437 U.S. at 600 (Stewart, J., dissenting) ("The Court . . . strikes what seems to me an equally damaging blow at basic principles of patent law by importing into its inquiry under 35 U.S.C. § 101 the criteria of novelty and inventiveness." (internal citations omitted)).

[CL34] However, the "inventive concept" inquiry remains separate and distinct from §§ 102 and 103. *See, e.g., Diehr*, 450 U.S. at 191 ("A rejection on [novelty or obviousness] grounds does not affect the determination that respondents' claims recited subject matter which was eligible for patent protection under § 101.").

[CL35] Thus, our courts have charted a course as to the "inventive concept" inquiry which establishes a pathway that is separate and apart from the well-worn trail of cases defining obviousness. Instead, the focus of step two of *Mayo*/*Alice* is a search for "something more," something that ensures the claims are "more than a drafting effort designed to monopolize the abstract idea." *Alice*, 134 S. Ct. at 2354–2357 (internal brackets omitted); *see also DDR Holdings*, 773 F.3d at 1259.

[CL36] "[S]omething more" may be present "when the claim limitations involve more than performance of well-understood, routine, and conventional activities previously known to the industry." *Berkheimer*, No. 2017-1437, 2018 WL 774096, at *5 (internal quotation marks and brackets omitted).

[CL37] "[S]omething more" may also be evidenced by the existence of specific "benefits" provided by the relevant invention as compared to the prior art. *See, e.g.*, *Bascom*, 827 F.3d at 1350 ("The inventive concept described and claimed in the '606 patent is the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user. This design gives the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server."); *Amdocs*, 841 F.3d at 1302 ("The benefits in *BASCOM* were possible because of customizable filtering features at specific locations remote from the user. Similarly, the benefits of the '065 patent's claim 1 are possible because of the distributed, remote enhancement that produced an unconventional result—reduced

data flows and the possibility of smaller databases."); *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1259 (Fed. Cir. 2017) ("The patented system achieved greater accuracy than these prior art systems by measuring inertial changes of the tracked object relative to the moving platform's reference frame."); *Enfish*, 822 F.3d at 1337 ("[O]ur conclusion that the claims are directed to an improvement of an existing technology is bolstered by the specification's teachings that the claimed invention achieves other benefits over conventional databases, such as increased flexibility, faster search times, and smaller memory requirement.").

B. Discussion

1. The Role of Factual Findings in the § 101 Context

[CL38] The Federal Circuit has repeatedly acknowledged that the inquiry under § 101 is a legal question that "'may contain underlying factual issues'" *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016); *see also In re Comiskey*, 554 F.3d 967, 975 (Fed. Cir. 2009) ("[T]here may be cases in which the legal question as to patentable subject matter may turn on subsidiary factual issues . . . ."); *Arrhythmia Research Tech., Inc. v. Corazonix Corp.*, 958 F.2d 1053, 1055–56 (Fed. Cir. 1992) ("Whether a claim is directed to statutory subject matter is a question of law. Although determination of this question may require findings of underlying facts . . . . with appropriate recognition of the burdens on the challenger of a duly issued United States patent.").

[CL39] The same is true of other legal questions that pervade patent law, including claim construction, obviousness, indefiniteness, and enablement. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 842 (2015) (explaining that construing patent claims sometimes involves making factual determinations); *Graham*, 383 U.S. at 17 ("While the ultimate question of patent validity is one of law . . . [§ 103] lends itself to several basic factual inquiries."); *Akzo*

Nobel Coatings, Inc. v. Dow Chem. Co., 811 F.3d 1334, 1343 (Fed. Cir. 2016) ("Indefiniteness is a question of law . . . subject to a determination of underlying facts."); *Alcon Research Ltd. v. Barr Labs., Inc.*, 745 F.3d 1180, 1188 (Fed. Cir. 2014) ("Whether a claim satisfies the enablement requirement of 35 U.S.C. § 112 is a question of law . . . although the determination may be based on underlying factual findings . . . .").

[CL40] The distinction between legal and factual questions is critical because factual determinations carry with them a burden of proof. *See Microsoft Corp., v. i4i P'ship,* 564 U.S. 91, 114 (2011) (Breyer, J., concurring) ("I believe it worth emphasizing that in this area of law as in others the evidentiary standard of proof applies to questions of fact and not to questions of law.").

[CL41] Factual questions are also reviewed under a more deferential standard of review, which promotes uniformity and reflects a proper view of a trial court's factfinding function. *Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp.*, 744 F.3d 1272, 1312 (Fed. Cir. 2014) (O'Malley, J., dissenting) ("The Supreme Court has made clear, however, that [a] narrow view of the trial court's factfinding function is an inaccurate one."), *cert. granted, judgment vacated sub nom. Lighting Ballast Control LLC v. Universal Lighting Techs., Inc.*, 135 S. Ct. 1173 (2015); *Teva*, 135 S. Ct. at 838 (2015) ("A district court judge who has presided over, and listened to, the entirety of a proceeding has a comparatively greater opportunity to gain that familiarity than an appeals court judge who must read a written transcript or perhaps just those portions to which the parties have referred." (citing *Lighting Ballast*, 744 F.3d at 1312 (O'Malley, J., dissenting)); *In re Bilski*, 545 F.3d 943, 994 (Fed. Cir. 2008) (Newman, J., dissenting) ("Each patent examination center, each trial court, each panel of this court, will have a blank slate on which to uphold or invalidate claims . . . add[ing] delay, uncertainty, and cost . . . ."); *Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc.*, 701 F.3d 1351, 1362 (Fed. Cir. 2012) (Moore, J., dissenting from denial of

petition for rehearing en banc) ("When we convert factual issues, or mixed questions of law and fact, into legal ones for our de novo review, we undermine the uniformity and predictability goals this court was designed to advance.").

[CL42] While neither the Federal Circuit nor the Supreme Court have defined exactly which aspects of the § 101 inquiry are legal or factual in nature, the Federal Circuit has explained that "whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact." *Berkheimer*, No. 2017-1437, 2018 WL 774096, at *5; *see also Aatrix Software. Inc. v. Green Shades Software, Inc.*, No. 2017-1452 (Fed. Cir. February 14, 2018) (same); *Ameritox, Ltd. v. Millennium Health, LLC*, 88 F. Supp. 3d 885, 911 (W.D. Wis. 2015) ("When, as here, Millennium is asking the court to infer that the combination of elements is conventional, it must supply some evidence to convince the trier of fact to accept its version of events. Since those facts are lacking here, Millennium's position is necessarily rejected.").

[CL43] Accordingly, the Court has made specific factual findings under the clear and convincing evidence standard with respect to the factual questions that underpin its § 101 analysis, including whether the Asserted Claims involve a combination of elements or steps that were well-understood, routine and conventional from the perspective of a person skilled in the art at the time the Asserted Patents were filed. *See Berkheimer*, No. 2017-1437, 2018 WL 774096, at *5. Where appropriate, the Court has also referenced these findings in discussing both steps of *Mayo*/*Alice*.[7]

[7] To the extent the Parties have a right to resolve these underlying factual issues through a jury trial, the Court considers this argument waived. Defendants specifically sought relief from this Court by invoking a rule that instructs the district court to make factual findings. *See* Fed. R. Civ. P. 52(c) ("A judgment on partial findings must be supported by findings of fact and conclusions of law as required by Rule 52(a)."); *Seaboard Lumber Co. v. United States*, 903 F.2d 1560, 1563 (Fed. Cir. 1990) ("Waiver requires only that the party waiving such right do so 'voluntarily' and 'knowingly' based on the facts of the case."). In response, Plaintiff did not object on Seventh Amendment grounds at any point in its briefing, at the hearing the Court held on the instant Motion, or at any point thereafter, even as Plaintiff also argued that factual issues were in dispute and should be resolved in its favor. Thus, in this case, Rule 52 is an appropriate mechanism to resolve the § 101 question. However, in future cases, it may not be.

2. Step One of *Alice*

[CL44] Under step one, the Court begins by analyzing the Asserted Claims to determine whether they are directed to an unpatentable abstract idea or something like an improvement to computer functionality. *See, e.g.*, *Visual Memory*, 867 F.3d at 1259.

[CL45] Defendants argue that the Asserted Claims are directed to "the collection, comparison, and classification of information." (Dkt. No. 265 at 15–16.) Defendants then assert that the Federal Circuit has "routinely" found claims directed to similarly abstract ideas to be patent ineligible. (*Id.*)

[CL46] Defendants further contend that the Asserted Claims are not directed to an improvement in computer functionality because the recited methods "do not improve the way computers operate." (*Id.* at 17–18.) Instead, Defendants argue, the Asserted Claims use generic components to analyze packets on a network without explaining "how to determine whether any packets belong to a 'conversational flow.'" (*Id.*)

[CL47] Plaintiff argues that the Asserted Claims directly relate to problems that arose because of limitations in prior art network monitors, "a problem arising squarely within the realm of computer technology." (Dkt. No. 278 at 10–11.)

[CL48] According to Plaintiff, the Asserted Claims address these problems with an unconventional technological solution, combining "both state and application classification functionality . . . into an ordered set of components that allow for the recognition and classification based on conversational flows." (*Id.* at 12–14 ("As the trial testimony and the patents show, the claims describe fundamentally technical solutions to the prior art packet analysis that was unable

to recognize disjointed exchanges of packets between network endpoints related to a single activity or application, a problem firmly rooted in computer technology.").)

[CL49] Plaintiff also disputes Defendants' formulation of the Asserted Claims as embodying the abstract idea of collecting, comparing, and classifying information. (*Id.* at 1 ("NetScout's over-simplified and reductivist approach is precisely what courts have criticized—because all claims can be characterized as abstract when reduced to an abstraction.").)

[CL50] At the outset, the Court agrees with Packet Intelligence. In fact, even NetScout concedes that its characterization of the claims as reciting nothing more than "the collection, comparison, and classification of information" can only be reached by viewing the Asserted Claims in their "simplest form." (Dkt. No. 265 at 15–16 ("Stripped of technical jargon . . . [and] [d]istilled to their 'simplest form,' the asserted claims are directed to the collection, comparison, and classification of information.").) *But see Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1345 (Fed. Cir. 2002) ("It is well settled that there is no legally recognizable or protected essential element, gist or heart of the invention . . . Rather, the invention is defined by the claims." (internal citations, quotation marks, and brackets omitted)).

[CL51] NetScout's reliance on precedent is similarly misguided, focusing on matching the abstract idea apparently lurking beneath the Asserted Claims in this case to high-level distillations offered by other courts with respect to unrelated claims. (Dkt. No. 265 at 16.) As discussed above, [CL11–30], this abstract idea matching approach too often proceeds, as it does in Defendants' analysis, without regard for the very limitations that improve on existing technology.

[CL52] By contrast, an examination of the Asserted Claims, in context with the relevant specifications and the evidence presented at trial, demonstrates that the Asserted Claims are

oriented towards solving a discrete technical problem: relating disjointed connection flows to each other. [FF17–21, 28–30]. Even Defendants' own expert conceded that the Asserted Patents are directed towards solving this discrete technical problem. (Dkt. No. 248, 10/11/2017 P.M. Trial Tr. at 136:7–136:16 ("Q. Do the patents describe a problem that they're trying to solve? A. They do. Q. And can you describe that [problem], please? A. Well, the problem they -- they coined a term called the 'disjointed flow problem' . . . [a]nd I'll use those words because they -- they're perfectly good words to describe the problem [of identifying traffic across multiple connection flows as being from the same application or protocol]."), 136:17–137:16.)

[CL53] To address this problem, the Asserted Claims recite specific technological solutions, such as identifying and refining a conversational flow so that different connection flows can be associated with each other and ultimately an underlying application or protocol. [FF22–27]. Again, this is something Defendants' expert explained. (Dkt. No. 248, 10/11/2017 P.M. Trial Tr. at 138:4–139:2 ("Q. And how did the inventors indicate they were going to solve this problem? . . . A. They created something called the conversational flow solution. They coined it – the term 'conversational flow' . . . Q. And does the patent describe how you would identify and classify different connections into a conversational flow? A. Yes, it does.").)

[CL54] In spite of this evidence, Defendants argue that "the asserted claims are directed to human-practicable concepts, which could be implemented in a 'brick-and-mortar post office.'" (Dkt. No. 265 at 25 (citing *Symantec*, 838 F.3d at 1318).)

[CL55] In fact, the Federal Circuit recently revisited *Symantec* in *Finjan*, distinguishing the latter case because the claims at issue "d[id] a good deal more" than recite the steps of filtering messages. *Finjan*, 879 F.3d at 1304. For example, the claims in *Finjan*, read together with the

specification, described how to construct a security profile that allowed for "more flexible and nuanced virus filtering." *Id.*

[CL56] In this same vein, the Asserted Claims in this case do more than just recite the idea of filtering and sorting data. [FF22–27]. For this reason, *Amdocs*, *DDR Holdings*, *Enfish*, and *Finjan* are instructive. Together, they describe circumstances, present in this case, which indicate that the Asserted Patents are not merely directed to an abstract idea. In particular, the Asserted Claims recite an "unconventional technological solution," *Amdocs*, 841 F.3d at 1300, not *any* approach to sorting packets, but a particular approach focused on constructing conversational flows that associate connection flows with each other and ultimately specific applications or protocols. *Enfish*, 822 F.3d at 1337; [FF21–34]. This allows packet monitors to classify network traffic in a way that prior network monitors could not. *Finjan*, 879 F.3d at 1305 (noting that the invention "employ[ed] a new kind of file that enable[ed] a computer security system to do things it could not do before"); '751 Patent at 2:53–56 ("By maintaining statistical measures in the flow-entries related to a conversational flow, embodiments of the present invention enable specific metrics to be collected in real-time that otherwise would not be possible."); [FF17–34].

[CL57] Nevertheless, Defendants maintain that the Asserted Claims still fail under step one because the claims themselves do not "explain *how* . . . to determine whether any packets belong to a 'conversational flow.'" (Dkt. No. 265 at 18) For example, Defendants argue that the claims "fail[] to recite any specific means or method to classify packets and belonging to the same 'conversational flow.'" (*Id.* at 9, 11 ("[C]laim 1 recites no specific means or methods for accomplishing the stated goal of determining whether packets are part of a 'conversational flow.'"), 14 ("[C]laims 10 and 17 recite performing various operations . . . [but] these operations are generic

and, in particular, fail to specify a means or method for achieving the stated goal of identifying packets as belonging to a 'conversational flow.'").[8]

[CL58] This argument fails because it focuses only on the claims in isolation rather than the claims as read in light of the specification. *But see Enfish*, 822 F.3d at 1335 ("[T]he 'directed to' inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether 'their character as a whole is directed to excluded subject matter.'").

[CL59] Taken together, the claims and the specification do teach how to identify that certain packets belong to the same conversational flow. [FF24–27]; *see also* '725 Patent at 7:51–8:29; *see also* '789 Patent at 10:15–11:32; '751 Patent at 7:53–8:30. In fact, Defendants' own expert acknowledged that the Asserted Patents explain how to associate packets from different connection flows with the same conversational flow. *See, e.g.*, (Dkt. No. 248, 10/11/2017 P.M. Trial Tr. at 138:24–139:2 ("Q. And does the patent describe how you would identify and classify different connections into a conversational flow? A. Yes, it does.").)

[CL60] Additionally, Defendants' argument essentially collapses a § 112 inquiry into the § 101 inquiry, which is inappropriate.[9] *See Visual Memory*, 867 F.3d at 1261 ("[W]hether a patent specification teaches an ordinarily skilled artisan how to implement the claimed invention presents an enablement issue under 35 U.S.C. § 112, not an eligibility issue under § 101.").

[CL61] Ultimately, based on the facts of this case, [FF17–34], the claims themselves, and the claims as read in the context of the specification, the Court concludes that the Asserted Patents are directed to an improvement in computer functionality rather than an unpatentable

[8] Defendants also raise a variety of other arguments under *Mayo*/*Alice* step one, including that the claims recite only generic, purely functional components, which the Court addresses under the second step, acknowledging that the steps in *Mayo*/*Alice* involve significant overlap.

[9] Allowing § 101 to swallow every other invalidity inquiry, as Defendants urge and some courts seem willing to do, essentially relieves defendants of their disclosure obligations. For example, in this case, Defendants did not argue at trial, or before, that the patents were invalid for lack of written description or enablement. Thus, to permit these arguments to be injected for the first time through § 101 unavoidably encourages gamesmanship and trial by ambush.

abstract idea. However, for completeness, the Court still finds it appropriate to discuss the second step of *Mayo*/*Alice*.

3. Step Two of *Alice*

[CL62] Under step two, Defendants argue that the steps recited in the Asserted Claims, individually or in combination, involve conventional components carrying out the routine steps of parsing and analyzing packets. (*Id.* at 19–24.)

[CL63] To support this argument, Defendants chart the Asserted Claims against various prior art references:

a lookup engine	"[T]he **network data engine** is executed by the CPU to provide the functionality for creating and deleting tables within the memory [] and ***searching the tables*** **according to a plurality of indices**." Ex. C (Iddon) at 4:6-11.[6]

(*Id.* at 10.)

[CL64] In response, Plaintiff argues that the combination of components recited in the Asserted Claims is inventive. *See, e.g.*, (Dkt. No. 278 at 12–13 ("The Asserted Claims cover the relevant subsystems and unique combination of components and operations that work together to capture and maintain application and state classification."), 24–25.)

[CL65] Plaintiff also argues that the "something more" offered by the Asserted Claims is evident from the numerous benefits, discussed by several witnesses at trial, which can be traced to the inventions recited by the Asserted Claims. (Dkt. No. 278 at 20–21; *see also* Dkt. No. 245, 10/10/17 P.M. Trial Tr. at 119:25–120:16 (discussing benefits attributable to the Asserted Claims).)

[CL66] With respect to the purported benefits identified by Plaintiff, Defendants reply that these benefits are too generic and too difficult to trace to the Asserted Claims. (Dkt. No. 282 at 5–6 ("PI, however, identifies nothing in the asserted claims that provides a concrete solution to obtain any of these alleged benefits.").)

[CL67] At the outset, the Court has already found that Defendants have failed to show that the combination of elements recited in the Asserted Claims would have been regarded as conventional, routine, or well-known by a skilled artisan in the relevant field as compared to the then existing state of the prior art and the limitations of those prior art references, even including the additional references cited by Defendants in the instant Motion. [FF17–FF35]; *Berkheimer*, No. 2017-1437, 2018 WL 774096, at *5 ("The mere fact that something is disclosed in a piece of prior art, for example, does not mean it was well-understood, routine, and conventional.").[10] Defendants have fundamentally failed to establish that the Asserted Claims lack an inventive concept. *Berkheimer*, No. 2017-1437, 2018 WL 774096, at *5.

[CL68] However, Plaintiff has also provided significant evidence of benefits achieved by the Asserted Claims as compared to the prior art. [FF28–35]. These benefits are not merely the sort of gains to efficiency or speed that necessarily result in using a computer to carry out any number of routine practices. *Id.* Rather, the Asserted Claims recite ways for network monitors to more precisely monitor network traffic, congestion, and malicious attacks. [FF21–FF35]; (Dkt. No. 245, 10/10/17 P.M. Trial Tr. at 119:4–121:15 ("The idea then of being able to use the patented technology and looking at packets, at flows, and at conversations . . . facilitates the increase in classification that gets you up to that higher tier, that 90 to 95 percent classification capability."));

[10] This conclusion is further bolstered by the jury's verdict in this case, which rejected Defendants' arguments that the conversational flow limitation existed in the prior art or was invented by someone other than the named inventors. *See Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1347 (Fed. Cir. 2015) (A "pragmatic analysis of § 101 is facilitated by considerations analogous to those of §§ 102 and 103 as applied to the particular case."); *Symantec*, 838 F.3d at 1330 (Stoll, J., dissenting) ("While I recognize that validity under §§ 102 and 103 is a distinct inquiry from eligibility under § 101, and may not be dispositive of § 101, the jury verdict nonetheless supports the notion that this particular ordering of the components in claim 7 was not conventional at the time."). This conclusion is also bolstered by the fact that the Asserted Patents have withstood challenges at the PTAB on anticipation and obviousness grounds. (Dkt. No. 278 at 21); *Ericsson Inc. v. TCL Commc'n Tech. Holdings, Ltd.*, No. 2:15-CV-00011, 2017 WL 5137401, at *8 (E.D. Tex. Nov. 4, 2017) ("The fact that the PTAB concluded that TCL failed to establish that a person of ordinary skill in the art would be motivated to combine computer-based security software with the relevant mobile platform technology . . . suggests that the systems claimed by the '510 patent are not merely conventional applications of computer technology.").

see also Finjan, 879 F.3d at 1304–1305 (distinguishing benefits such as "greater speed and efficiency" from other benefits such as "more flexible and nuanced virus filtering"); *Amdocs*, 841 F.3d at 1300–1301 (recognizing the ability to address network congestion as a benefit).

[CL69] Accordingly, Defendants have failed to establish that the Asserted Claims lack an inventive concept.[11]

III. CONCLUSION

For the reasons set forth above, the Court concludes that Defendants have failed to show that the Asserted Claims are ineligible under § 101. Accordingly, Defendants' Motion (Dkt. No. 265) is **DENIED**.

[11] Plaintiff also argues, albeit in a single sentence, that even if Defendants prevail under *Mayo*/*Alice*, the instant Motion is still procedurally deficient because § 282 does not provide for a defense challenging subject-matter eligibility. (Dkt. No. 278 at 9–10 (citing a then pending, now denied petition for certiorari)). The Federal Circuit has essentially rejected this argument. *See Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1330 (Fed. Cir. 2015) ("Section 101 *validity* challenges today are a major industry, and they appear in case after case in our court and in Supreme Court cases . . . ." (emphasis added)); *see also GoDaddy.com LLC v. RPost Commc'ns Ltd.*, No. CV-14-00126-PHX-JAT, 2016 WL 3165536, at *5 (D. Ariz. June 7, 2016) ("Similar to the Federal Circuit in *Versata*, the Court finds that a 'hyper-technical adherence' to the section heading of § 101 is not enough to overcome decades of interpreting § 101 as a valid defense in patent infringement litigation."), *aff'd*, 685 F. App'x 992 (Fed. Cir. 2017) (unpublished), *cert. denied*, No. 17-695, 2017 WL 5237829 (U.S. Dec. 11, 2017). Accordingly, the Court also rejects this argument.