No. 17-

IN THE

Supreme Court of the United States

OPENET TELECOM, INC., OPENET TELECOM LTD.,

Petitioners,

v.

AMDOCS (ISRAEL) LIMITED,

Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED
STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTION PRESENTED

To be patent eligible, a patent must claim "the means or method of producing a certain result, or effect, and not [the] result or effect produced." *Corning v. Burden*, 56 U.S. 252, 267-68 (1854). This principle has driven this Court's patentable subject matter jurisprudence for over 150 years, including most recently the "search for an inventive concept" described in the second step of the *Alice/Mayo* framework. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014) (quoting *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 72 (2012)). Because a patent's claims define the scope of the invention, this Court stated in both *Alice* and *Mayo* that this second step of the eligibility analysis turns on what is "in the claims." 134 S. Ct. at 2355; 566 U.S. at 78.

The question presented is: Whether the Federal Circuit erred by looking beyond the claims to the patent specification to assess patent eligibility?

PARTIES TO THE PROCEEDING

All parties to the proceedings are identified in the case caption.

CORPORATE DISCLOSURE STATEMENT

Openet Telecom Ltd. is the parent company of Openet Telecom, Inc. No publicly traded company owns 10% or more of Openet Telecom Ltd.'s stock.

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PETITION FOR A WRIT OF CERTIORARI

Petitioners Openet Telecom, Inc. and Openet Telecom Ltd. ("Openet") respectfully petition for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit.

OPINIONS BELOW

The opinion of the court of appeals (App. 1a–73a) is reported at 841 F.3d 1288 (Fed. Cir. 2016). The decision of the district court (App. 74a-101a) is reported at 56 F. Supp. 3d 813 (E.D. Va. 2014). The order denying rehearing (App. 102a-103a) is unpublished.

JURISDICTION

The judgment of the Federal Circuit was entered on November 1, 2016. On March 9, 2017, the Federal Circuit denied Openet's petition for rehearing. This Court has jurisdiction under 28 U.S.C. § 1254(1). On May 30, 2017, the Chief Justice extended the time to file a petition for certiorari until July 24, 2017. The jurisdiction of the district court was invoked under 28 U.S.C. § 1331.

STATUTORY PROVISIONS INVOLVED

Section 101 of the Patent Act states that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101.

INTRODUCTION

The four patents in this case involve "an accounting and billing problem faced by network service providers." App. 2a. They describe different ways to "track customer usage of computer network services" in order to generate bills. App. 75a. The claims themselves are broad and functional. For example, Claim 1 of U.S. Patent No. 7,631,065 is a software claim: It requires "computer code" "embodied on a computer readable storage medium." App. 23a. The claimed "code" does three things: (1) "receive[s]" an "accounting record" from a "first source," (2) "correlate[s]" that record with "accounting information" from "a second source," and (3) use[s] that "accounting information" to "enhance" the first record. *Id*. That's it.

The District Court rightly found this claim was directed to an abstract idea—"correlating two network accounting records to enhance the first record"—and therefore unpatentable under this Court's decision in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014). App. 85a-86a. The Federal Circuit panel majority did not disagree that the claim was directed to an abstract idea. But it held that the patent elsewhere contained an "inventive concept" sufficient to make the claim patent eligible. The majority pointed to the "invention's distributed architecture," "network devices," and "gatherers," which supposedly rendered the invention an "improvement over prior art technologies." App. 21a-26a.

That analysis was deeply flawed: *None* of those supposed features of the "invention" is mentioned in the actual claim under consideration. The claim itself

is barren of technical detail. Every identified feature instead appears in the patent specification. As Judge Reyna forcefully pointed out in his dissent, this decision to save a claim's eligibility by relying solely on the patent specification reflects a stark and troubling departure from precedent. App. 44a, 55a-57a.

This Court should grant certiorari to review the Federal Circuit's decision. First and foremost, the decision conflicts with this Court's precedent, including *Alice*. There, the Court held that the patent eligibility inquiry must turn on "whether *the claims* are directed" to an abstract idea, and, if so, whether there is an inventive concept "*in the claims*"—not the specification. 134 S. Ct. at 2355 (emphases added).

Second, the decision conflicts with the Federal Circuit's own precedent. It has held, repeatedly and recently, that "[t]he § 101 inquiry *must focus on the language of the Asserted Claims themselves.*" *See, e.g.*, *Synopsys Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016) (emphasis added). The decision below says the exact opposite, leaving the proper eligibility approach uncertain for district courts nationwide. Indeed, there is now a petition for certiorari pending in the *Synopsys* case that argues that the Federal Circuit should have taken the approach there that it adopted in the decision below. *See* Petition for Writ of Certiorari, No. 16-1288 (Apr. 27, 2017). This discord in Federal Circuit precedent on the critical issue of patent eligibility justifies the Court's review.

Finally, the decision below injects further confusion into the *Alice* framework that will burden courts and the patent system more generally. As one commentator

pointed out, the decision below reflects that, internally, "the Federal Circuit continues to be divided" on the issue of patent eligibility. Dennis Crouch, *Federal Circuit's Internal Debate of Eligibility Continues*, Patently-O, Nov. 13, 2016, https://patentlyo.com/patent/2016/11/internal-eligibility-continues.html. "By luck-of-the-panel in this case, the minority on the court as a whole"—*i.e.*, those Judges "pushing against" the application of *Alice* and *Mayo*—became the "majority on the panel" in this case. *Id*. And they have not concealed their hostility to the Court's patent eligibility framework. One judge in the majority has openly advocated for an approach that "avoid[s] resolving an undefined 'inventive concept' applied to eligibility." *Bascom Global Internet Servs. v. AT&T Mobility LLC*, 827 F.3d 1341, 1353 (Fed. Cir. 2016) (Newman, J., concurring). The other, at oral argument in this very case, described the *Alice* framework as a "plague on the patent system." Oral Arg. Recording 42:17-20. Important legal questions of patent eligibility should not turn on the "luck-of-the-panel" in this way.

This Court should grant certiorari and reverse.

STATEMENT OF THE CASE

I. The Law of Patentable Subject Matter

Section 101 of the Patent Act "defines patentable subject matter." *Mayo*, 566 U.S. at 70. It provides: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. This Court has "long held that

[§ 101] contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice*, 134 S. Ct. at 2354 (the Court has "interpreted § 101 and its predecessors in light of this exception for more than 150 years"). This case is about the third category—abstract ideas.

The reason an abstract idea cannot be patented is that a patent grants an inventor a monopoly for a limited time in exchange for making specific, concrete advancements to a technical field. *Cf. Bonito Boats Inc. v. Thunder Craft Boats*, 489 U.S. 141, 148 (1989) ("from the outset, federal patent law has been about the difficult business 'of drawing a line between the things which are worth to the public the embarrassment of an exclusive patent, and those which are not'") (quoting 13 Writings of Thomas Jefferson 335 (Memorial ed. 1904)). If a patent could claim an abstract idea, the patent would monopolize more than the patentee's contributions to the field and preempt all applications of the idea itself. *Morse*, 56 U.S. at 113. Thus, "[a]n idea of itself is not patentable," no matter how narrowly claimed. *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. 498, 507 (1874).

Twice in the past five years—first in 2012 in *Mayo*, and again in 2014 in *Alice*—this Court has reaffirmed that only claims reciting inventive elements are patent eligible. *Alice*, 134 S. Ct. at 2355; *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 78 (2012)) Under the *Alice/Mayo* framework, courts must first consider whether an invention claims an abstract idea (*Alice*) or law of nature (*Mayo*). *Id.* If so, under the second step of the *Alice/Mayo* framework, the court must undertake "a search for an inventive concept [to find] an

element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." *Alice*, 134 S.Ct. at 2355 (internal quotations omitted).

If a claimed invention passes the patent eligibility threshold of Section 101, a patent may issue for that invention if the patent claims comply with the Patent Act's validity provisions, including Sections 102 (novelty) and 103 (obviousness). The patent eligibility provisions of Section 101 operate separately and independently of the patent validity provisions of Sections 102 and 103. *See Parker v. Flook*, 437 U.S. 584, 593 (1978). It thus makes no difference for patent eligibility whether a patent purports to be a new application of an existing idea. *Diamond v. Diehr*, 450 U.S. 175, 188-89 (1981). What matters is whether the patent claims specific, inventive means for implementing the idea.

II. The Amdocs Patents

The four patents Amdocs asserts against Openet descend from a single patent application filed in 1997. Each patent-in-suit relates to network accounting and billing. The aforementioned '065 patent—as well as U.S. Patent Nos. 6,947,984 ("the '984 patent") and 7,412,510 ("the '510 patent"), which share substantively identical specifications with the '065 patent—"relates to accounting and billing for services in a computer network." *See* '065 Patent (1:32-33). The continuation-in-part U.S. Patent No. 6,836,797 ("the '797 patent") "relates to data records, and more particularly to records reflecting various services afforded utilizing a network." '797 Patent (1:16-18).

The field of data processing—known as "data mediation"—existed long before the four patents issued. It has been used for as long as telecommunications companies have tracked and billed customers' network usage: "[d]ata mediation software collects, processes, and compiles [the relevant] network records so that network usage can be tracked and billed appropriately." *Amdocs (Isr.) Ltd. v. Openet Telecom. Inc.*, 761 F.3d 1329, 1331 (Fed. Cir. 2014); *see also* '065 Patent (1:64-66) ("Telephone companies track information such as circuit usage so it can be correlated with account information.").

The four patents at issue in this case claim basic data compilation processes. The asserted claims vary in level of detail, with the broadest patent (the '065 Patent) claiming a computer program that receives an accounting record from one source, correlates it with accounting information from a second source, and adds data from that second source to the first accounting record. App. 23a. Claim 1 is representative of the asserted claims:

> 1. A computer program product embodied on a computer readable storage medium for processing network accounting information comprising:
>
> computer code for receiving from a first source a first network accounting record;
>
> computer code for correlating the first network accounting record with accounting information available from a second source; and

computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.

The other patents differ slightly, but are not meaningfully less generic. The '797 patent "concentrat[es] on the structure of the [data records]," 761 F.3d at 1335, and claims a method for "generating a single record reflecting multiple services for accounting purposes" by identifying selected services and collecting data about those services. '797 Patent (16:30-37). The '984 and '510 patents each relate to "creating reports based on the generated [data records], and . . . sending alerts based on those reports." 761 F.3d at 1333. They each claim collecting network usage information from components on a network, filtering and aggregating the information, completing a plurality of data records, storing the records in a database, and outputting records in response to queries submitted to the database. '984 Patent (15:31-63); '510 Patent (16:4-25).

The asserted claims do not include technical details or technological solutions for completing these standard record processing tasks. The sole technology is in the patent specifications, but it is also nonspecific and dated. For example, the specifications teach implementation of the claimed inventions using generic and functional components such as "network devices," "information source modules (ISMs)," and "gatherers." *E.g.*, '065 Patent (4:29-54). "The network devices represent any devices that could be included in a network." *Id.* (5:11-12). "[T]he ISMs represent modular, abstract interfaces that are designed to be platform-neutral," such as "Generic Proxy Server[s]." *Id.* (5:35-63). "[G]atherers can be any

hardware and/or software that perform the functions of a gatherer." *Id.* (6:58-60). The specifications also recognize that the claimed process is nothing new, stating that "distributed data gathering, filtering and enhancements performed in the system . . . enables load distribution," which was a useful feature in the 1990s when computers had limited memory and data processing capabilities. *Id.* (4:34-38).

III. Proceedings Below

A. The District Court Finds the Asserted Claims Unpatentable

Amdocs filed suit against Openet in the Eastern District of Virginia in 2010. In 2013, Judge Brinkema of the Eastern District of Virginia entered a claim construction order and granted summary judgment of non-infringement in favor of Openet. *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, Case No. 1:10-cv-910-LMB/TRJ, 2013 U.S. Dist. LEXIS 9257, 2013 WL 265602 (E.D. Va. Jan. 22, 2013). In 2014, the Federal Circuit affirmed part of the claim construction but found disputed issues of material fact and remanded the case for further proceedings. 761 F.3d 1329. On remand, and in the immediate wake of *Alice*, Openet moved for judgment on the pleadings pursuant to Fed. R. Civ. P. 12(c), arguing that the asserted claims were not drawn to patentable subject matter.

The district court, applying the two-step *Alice/Mayo* framework, found the functional and generic claims of the four patents unpatentable. Its analysis of claim 1 of the '065 patent was typical of its analysis of the four patents. It first found that "claim 1 focuses on the concept

of correlating two network accounting records to enhance the first record," which is an abstract idea. App. 85a-86a. The district court then found that the claim "does not add to the idea of correlating two network accounting records," noting that "it is difficult to conceive of broader terms with which the idea of correlating two records could be described." App. 86a. "Claim 1 does not limit the correlation to any specific hardware, nor give any detail regarding how the records are correlated or enhanced." App. 86a. The district court criticized Amdocs for basing its patent eligibility arguments on "unclaimed aspects of how the invention operates," which "cannot affect patent eligibility" if not claimed. App. 88a-89a.

The district court's lengthy opinion paid close heed to the preemption concerns underlying patent eligibility considerations: "If [a] claimed abstract idea has no substantial practical application except in connection with the particular field claimed, then allowing a claim to that idea, even if limited to a particular field would wholly preempt the idea and in practical effect would be a patent on the idea itself." App. 80a-81a (citing *Gottschalk v. Benson*, 409 U.S. 63, 71-72 (1972)). Recognizing the distinction between patent eligibility and invalidity, the district court found that Amdocs's patent eligibility "argument misses the point" by focusing on "novelty" under 35 U.S.C. § 102 and "the notice function" of 35 U.S.C. § 112, rather than the "preemption" concerns implicit in § 101. App. 98a. The district court accordingly found that "Amdocs's asserted claims recite such conventional operation, in such a general way, that even if the inventor had developed an actual working system, the patent claims could foreclose fields of research beyond the actual invention." App. 99a.

B. A Sharply Split Federal Circuit Reverses and Finds the Claims Patent Eligible

A divided Federal Circuit reversed the district court. Judge Plager, joined by Judge Newman, acknowledged that "[t]he two-step framework, set out by the Supreme Court for distinguishing patents that claim so-called laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts is now familiar law." App. 9a. The panel majority, however, eschewed any "single universal definition of abstract idea," finding "it is difficult to fashion a workable definition to be applied to … as-yet-unknown inventions." App. 10a. Absent a "single, succinct, usable definition or test," the panel majority determined that the proper "decisional mechanism" for patent eligibility determinations is "to examine earlier cases in which a similar or parallel descriptive nature can be seen." App. 10a-11a.

After adopting that "flexible approach" to patent eligibility, App. 11a, the panel majority surveyed recent Federal Circuit decisions. App. 14a-22a. The panel majority recognized that the patent claims at issue here are "somewhat (at least facially) similar" to data processing claims held unpatentable in other cases. App. 24a. But it held that they "are much closer" to claims held patent eligible in other cases, because they were "directed to an improvement in computer functionality under step one . . . or recit[ing] a sufficient inventive concept under step two—particularly when the claims solve a technology based problem." App. 25a. In so ruling, the panel assumed that the patent claims were directed to an abstract idea, without identifying what

the abstract idea was, before jumping to the second step. App. 25a. ("Indeed, even if we were to agree that claim 1 is directed to an ineligible abstract idea under step one, the claim is eligible under step two because it contains a sufficient 'inventive concept.'"); *accord* App. 43a ("The majority avoids determining whether the asserted claims are directed to an abstract idea, or even identifying what the underlying abstract idea is.")

When it turned to the second step of the *Alice* analysis, the panel majority ruled that patents were patent eligible by looking to the patents' *specifications*. It "examined the claims in light of the specification," App. 23a, and held that the "claim[s] entail[ed] an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases)," even though the technological features were not recited in the claims. App. 26a. What's more, the panel majority conceded that the claimed invention "requires arguably generic components, including network devices and 'gatherers' which 'gather' information." App. 26a.

Judge Reyna dissented vigorously. First, he insisted that the court could not gloss over the first step in the *Alice/Mayo* framework. App. 43a. Judge Reyna explained that the eligibility inquiry requires courts to determine whether the claim is directed to an abstract idea because a court can only evaluate whether an inventive concept has been added to an abstract idea if it first identifies what the abstract idea is. App. 49a-50a. Judge Reyna found that, at the very least, a claim is directed to an abstract idea if it recites a "desired goal . . . absent structure or procedural means for achieving that goal." App. 49a. Judge Reyna

concluded that patent claims at issue here are abstract under that standard—while they may "recite[] a software product embodied on a storage medium, [they] . . . provide no structural limitation of either the physical medium or the digital software." App. 58a.

Second, Judge Reyna criticized the majority for importing the critical elements of its eligibility analysis, such as the use of distributed architecture, from the patents' specifications. App. 44a. Judge Reyna emphasized that this "contravenes the fundamental principle" that patent eligibility must turn on the claims—and not on whether a different patent eligible invention could have been claimed based on the disclosures of the specification. App. 44a. Thus, Judge Reyna looked solely to the claims in the four patents and found that the claims in two of them (the '065 and '797 patents) lacked the requisite detail to be patent eligible. App. 58a, 79a. Judge Reyna would have found the claims in the other two patents (the '984 and '510 patents) eligible under his approach. But the methodological flaws in the panel opinion identified by Judge Reyna infected the panel's analysis of all the patent claims at issue. App. 63a-64a.

REASONS FOR GRANTING THE PETITION

I. The Decision Below Conflicts with this Court's Precedent and Other Decisions of the Federal Circuit.

The decision below undermines more than 150 years of case law prohibiting patents that claim functions without claiming specific structures or steps for performing those claimed functions. Indeed, until this case, the Federal

Circuit adhered to the correct rule that patent eligibility turns solely on the claims. *E.g.*, *Synopsys*, 839 F.3d at 1149 ("complex details from the specification cannot save a claim directed to an abstract idea that recites generic computer parts"). This Court should grant certiorari to restore that rule.

A. To Be Patent Eligible, the Inventive Elements Must Be Found in the Claims.

1. For over 150 years, this Court has required that a patent claim recite more than broad, generic functions to be patent eligible. A function (such as correlating or enhancing data) is akin to a formula or algorithm. It is not an invention at all but rather a building block that should be free to all. *Le Roy v. Tatham*, 55 U.S. 156, 175 (1852) ("A principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right."). The patent system is designed to protect inventive ways of *performing* functions, not the functions themselves. Accordingly, a "patent confers . . . the exclusive right to use the means he specifies to produce the result or effect he describes, and nothing more." *Morse*, 56 U.S. at 119.

In 1854, this Court stressed the difference between the patentable performance of functions and unpatentable functions when it was confronted with Samuel Morse's attempt to claim "the use of the motive power of the electric or galvanic current, which I call electro-magnetism, however developed for marking or printing intelligible characters, signs, or letters, at any distances . . ." *Morse*, 56 U.S. at 112. Morse's invention overcame a problem in the prior art associated with the use of

a "galvanic current" over a distance—the current "gradually [became] weaker as it advanced on the wire" until it "was not strong enough to produce a mechanical effect." *Id.* at 107. Solving this problem paved the way for widespread adoption of telegraphic communication using Morse code. But the patent claim was nonetheless rejected because it recited nothing more than a function—using electromagnetism to transmit signals. *Id.* at 113. Nothing limited the claim to any hardware or specific steps for performing the function. *Id.* Morse's claim, if upheld, would have prevented others from using electromagnetism to transmit messages, even in better ways. *Id.* at 112-113 ("[W]hile he shuts the door against inventions of other persons, the patentee would be able to avail himself of new discoveries in the properties and powers of electromagnetism which scientific men might bring to light.").

It made no difference that Morse intended to use his invention for transmitting telegraphic messages in Morse code, or even that his invention was one of the great technological advancements of the nineteenth century. The Court found that only "[w]hoever discovers that a certain useful result will be produced, in any art, machine, manufacture, or composition of matter, *by the use of certain means*, is entitled to a patent for it." *Id.* at 119 (emphasis added). The requirement that patents must claim specific and inventive ways of implementing functions has been adopted in numerous other cases over the years. *See Flook*, 437 U.S. at 590-591 (collecting cases).

2. This Court has made clear, time and again, that, when assessing eligibility within this framework, what matters are the patent *claims*. Most recently, in *Alice*, the Court framed the patent eligibility inquiry this way: "First,

we determine whether *the claims* at issue are directed to one of those patent-ineligible concepts. If so, we then ask, '[w]hat else is there *in the claims* before us?'" 134 S. Ct. at 2355 (citations omitted; emphases added). Similarly, in *Mayo*, the Court's focus was on "the particular *claims* before" it. 566 U.S. at 72. In *Bilski v. Kappos*, the Court analyzed what the "*claims* in petitioners' application do." 561 U.S. 593, 612 (2010). And so on.

By focusing on the specification rather than the claim to evaluate patent eligibility, the Federal Circuit ran afoul of this Court's precedents and permitted the type of claim the *Alice/Mayo* framework was meant to weed out. Claim 1 of the '065 patent merely recites correlating and enhancing data records without any additional features. The other patent claims at issue are similarly generic and invalid. And nothing in their specifications can change the fundamentally abstract nature of the claims at issue. "A claim that recites an abstract idea must include 'additional features' to ensure that the claim is more than a drafting effort designed to monopolize the abstract idea." *Alice*, 134 S.Ct. at 2357. No such features are present in the claims here. As Federal Circuit Judge Bryson explained, courts must take care to see through (and find ineligible) patents "dressed up in the argot of invention" that, when uncloaked, "simply describe a problem, announce purely functional steps that purport to solve the problem, and recite standard computer operations to perform some of those steps." *Loyalty Conversion Sys. Corp. v. Am. Airlines, Inc.*, 66 F. Supp. 3d 829, 845 (E.D. Tex. 2014) (Bryson, J.).

The deficiencies in the patent claims in this case are no different than the deficiencies that rendered

countless other patents ineligible even if they purported to solve "massive" technological problems in their day. *See* App. 26a. Where claims are too generic to be patentable because they impede others from using new or different tools to perform the same functions, this Court has not hesitated to invalidate them. For example, in *Incandescent Lamp Patent*, the Court found invalid a patent for generating light using a filament made of "fibrous and textile materials" when it was asserted against Thomas Edison's incandescent lightbulb. *Consol. Elec. Light Co. v. McKeesport Light Co.*, 159 U.S. 465, 472 (1895). Although the bamboo filament in Thomas Edison's lightbulb unquestionably "made use of a fibrous or textile material, covered by the patent," *id.* at 471-72, this Court found that a patent could not "put under tribute the results of the brilliant discoveries made by others" who seek to perform the same light-generation function in different and better ways. *Id.* at 474; *see also id.* at 476 ("[T]hat paper happens to belong to the fibrous kingdom did not invest them with sovereignty over this entire kingdom, and thereby practically limit other experimenters to the domain of minerals."). So too here. Because Amdocs did not claim a specific inventive way of performing the function of records correlation—perhaps one that uses specific gatherers or network devices—it cannot have "sovereignty over th[e] entire kingdom" and prevent others from correlating records in new, different, and better ways. *Id.*

This Court has applied similar reasoning in other cases to emphasize that patents cannot broadly or generically claim functions that would prevent others from using new tools in the same space to develop better or alternative ways of generating the claimed result. In

Fuller v. Yentzer, the Court explained that a patent cannot "be sustained if the claim is for a result, the established rule being that the invention, if any, within the meaning of the Patent Act, consists in the means or apparatus by which the result is obtained." 94 U.S. 288, 288 (1877). And in *Burr v. Duryee*, the Court refused to allow a patent to cover "all previous or future inventions for the same purpose." 68 U.S. 531, 576 (1864); *accord Wyeth v. Stone*, 30 F. Cas. 723, 727 (C.C.D. Mass., 1840) (Story, J.) ("The patentee claims an exclusive title to the art of cutting ice by means of any power, other than human power. Such a claim is utterly unmaintainable in point of law. It is a claim for an art or principle in the abstract, and not for any particular method or machinery, by which ice is to be cut. No man can have a right to cut ice by all means or methods, or by all or any sort of apparatus.").

3. The claim language must be the focus of the patent eligibility analysis to ensure that the public knows what is, and is not, protected by a patent. If patentees are instead allowed to patent generic functions (such as correlating and enhancing data) without providing specific inventive details in the claims, such patents will impede innovation by stymying those that seek to design-around patents and create better ways of performing the claimed functions. Mark A. Lemley, *The Myth of the Sole Inventor*, 110 MICH. L. REV. 709, 717, 753-54 (2012) (arguing that designing-around patent claims drives innovation); Craig A. Nard, *A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 1, 40-41 (2000) ("The practice of designing-around extant patents creates viable substitutes and advances, resulting in competition among patented technologies.").

By focusing the eligibility analysis on what is claimed, this Court has ensured that specific advances are rewarded while leaving others room to innovate. *See* Joshua D. Sarnoff, *Patent-Eligible Inventions after Bilski: History and Theory*, 63 HASTINGS L.J. 53 (2011) (exploring historical and policy underpinnings of the requirement that claims contain an inventive element to be patent eligible). But where the claims lack a specific inventive advance—leaving them so generic as to broadly preclude further innovation—this Court has rejected them. *See, e.g.*, *Morse*, 56 U.S. at 113 (rejecting claim because "[i]f this claim can be maintained, it matters not by what process or machinery the result is accomplished."). These concerns are particularly important for software patents, such as those at issue here. Wendy Seltzer, *Software Patents and/or Software Development*, 78 BROOKLYN L. REV. 929, 943 (2013) ("It is not the ideas, but their often-challenging development and implementation, that need incentive."); Mark A. Lemley, *Software Patents and the Return of Functional Claiming*, 2013 WIS. L. REV. 905, 908 ("We wouldn't permit in any other area of technology the sorts of claims that appear in thousands of different software patents.")

The Federal Circuit has parted ways with this long line of precedent. If left to stand, the decision below will authorize courts to permit patents that cover broad subject areas so long as there is something in the patent specification that could be characterized as a technological field or improvement over prior art. This will result in approval of "broad and sweeping" claims that are "vastly disproportionate to their minimal technological disclosure." *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1265-66 (Fed. Cir. 2014) (Mayer, J., dissenting).

And that, in turn, will leave "practitioners in the dark about what causes an improvement to either rise or not rise to the level of a 'patent-eligible concept' or a 'patent-eligible application' deserving of patent protection. This ambiguous process opens the door for subjective jurisprudence." Paul R. Juhasz, *Amdocs v. Openet Exposes Achilles Heel in the Alice Two-Step Process*, Patent Horizon (Nov. 10, 2016), http://www.patenthorizon.com/blog-posts/amdocs-v-openet-exposes-achilles-heel-in-alice-two-step-process.

The Court should grant review in this case to ensure that the decision below does not serve as a roadmap for circumventing the second step of the *Alice/Mayo* framework. Absent such review, the decision will support the continued effort of certain judges, including one on the panel below, to make patent eligibility virtually automatic for any patent that purports to be new and useful, without regard to the abstractness of its claimed invention. *Bascom*, 827 F.3d at 1353 (Newman, J., concurring) ("I propose returning to the letter of Section 101, where eligibility is recognized for 'any new and useful process, machine, manufacture or composition of matter'" no matter if "any of these classes is claimed so broadly or vaguely"). This Court should grant this petition and again confirm that it is the patent claims that must include a non-abstract "means or method of producing a certain result, or effect, and not [merely] . . . the result or effect produced." *Diehr*, 450 U.S. at 182, n.7.

B. The Federal Circuit Is Split Over Whether It May Look Beyond the Claims to Find Abstract Claims Patent Eligible.

Certiorari is also justified to resolve the internal conflict at the Federal Circuit over whether the eligibility analysis must be confined to the patent claims.

1. The contrast between the decision below and the Federal Circuit's *Synopsys* decision could hardly be more stark. *See* 839 F.3d 1138.[1] In that case, the Federal Circuit invalidated claims related to microprocessor designs because "[t]he § 101 inquiry *must focus on the language of the Asserted Claims themselves*." *Id.* at 1149 (emphasis added). Here, the Federal Circuit took the exact opposite approach as there is nothing in the language of the asserted claims that confers eligibility. They speak in broad terms of correlating and enhancing data; the patents' sole technological details are included in their specifications. App. 3a, 55a-56a.

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1. There is currently a petition for certiorari pending in *Synopsys*, which is scheduled for consideration at the long conference. The first question presented in that petition raises the same question as this petition. The petition in *Synopsys*, however, takes a position directly contrary to the petitioner in this case—arguing that the patent eligibility analysis should extend into the specification—underscoring the internal division in the Federal Circuit. Because the issues overlap, the Court may wish to consider the petition for certiorari in this case along with the petition in *Synopsys*, and grant the cases in tandem. If it grants certiorari in *Synopsys* before it considers this case, it should at the very least hold and GVR this petition.

And the decision below does not only conflict with *Synopsys*. That case followed a line of cases that restricted the patent eligibility analysis to the claims themselves. *See*, *e.g.*, *Accenture Global Servs.*, *GmbH v. Guidewire Software*, *Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013) ("the important inquiry for a § 101 analysis is to look to the claim"); *Content Extraction & Transmission LLC v. Wells Fargo Bank*, *Nat'l Ass'n*, 776 F.3d 1343, 1346 (Fed. Cir. 2014) ("We focus here on whether the claims of the asserted patents fall within the excluded category of abstract ideas."). In those cases, it made no difference whether the specification purported to recite a technological solution to a technological problem. The abstract, functional claims were simply ineligible.

There is no prospect that this division will be resolved absent the Court's intervention, leaving patent eligibility dependent on the members of the panel selected to hear a case. Indeed, just a month before the decision below issued, a different Federal Circuit panel found that "[t]he district court erred in relying on technological details set forth in the patent's specification and not set forth in the claims to find an inventive concept." *Intellectual Ventures*, 838 F.3d at 1322. Here, the panel instead reversed the district court for *not* relying on technological details set forth in the patent's specification. *See* App. 44a (Reyna, J., dissenting) ("The majority also relies on the specification to import innovative limitations into the claims at issue."). Certiorari is needed to resolve which approach is correct.

2. This case provides an ideal vehicle to resolve this question because the panel adopted the wrong approach below. Relying "on the specification to import innovative limitations into the claims at issue . . . contravenes the

fundamental princip[le] that the section 101 inquiry is about whether *the claim*s are directed to a patent-eligible invention, not whether *the specification* is so directed." App. 44a (Reyna, J., dissenting). This has been the standard in countless prior decisions, and it should not be changed now. *See*, *e.g.*, *Affinity Labs of Tex.*, *LLC v. DIRECTV Digital*, *LLC*, 838 F.3d 1253, 1258 (Fed. Cir. 2016) ("The inventive concept step requires us to look with more specificity at what the claim elements add."); *Affinity Labs of Tex.*, *LLC v. Amazon.com*, *Inc.*, 838 F.3d 1266, 1269 (Fed. Cir. 2016) ("the claims do no more than describe a desired function or outcome, without providing any limiting detail that confines the claim to a particular solution to an identified problem").

Left uncorrected, the decision below will transform the patent eligibility analysis by authorizing courts to ask whether a patent-eligible invention *could have been claimed* based on details in the specification—rather than whether a patent-eligible invention actually was claimed. Here, the specifications referenced hardware found in a computer network to collect, correlate, and enhance network accounting records, but nothing in the claims recited those technical details or explained how the network accounting records would be enhanced or correlated. The claims instead only spoke of correlating and enhancing records. And they were construed only to specify where—not how—the claimed enhancement would occur.

These abstract claims should not have been saved by combing the specification for technical details. Only the claims inform "what type of discovery is sought to be patented" and accordingly only the claims themselves

should determine whether an invention is patent eligible. *Flook*, 437 U.S. at 593; *see also* Giles S. Rich, *The Extent of the Protection and Interpretation of Claims-American Perspectives*, 21 INT'L REV. INDUS. PROP. & COPYRIGHT L. 497, 499 (1990) ("To coin a phrase, *the name of the game is the claim*.") (emphasis added).

3. Examples abound of the inconsistent results that will continue absent review of the decision below. In *Digitech*, the Federal Circuit found claims directed to "a process of taking two data sets and combining them into a single data set" to be unpatentable, even though that patent specification "disclose[d] an 'improved device profile'" that overcame a problem in the prior art. *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1347-48, 1351 (Fed. Cir. 2014). Here, the panel majority found virtually indistinguishable claims patentable—like the *Digitech* claims, the claims here call for the combination of data sets by "receiving from a first source a first network accounting record," "correlating [that] record with accounting information available from a second source," and "using the [correlated] accounting information . . . to enhance the first network accounting record." App. 23a.

Similarly inconsistent with the decision below is the Federal Circuit's conclusion that claims that recited steps such as "receiving a plurality of data streams" and "displaying . . . results" to derive "a composite indicator" were ineligible. *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1351-52 (Fed. Cir. 2016). Yet the decision below found the claims in the '797 patent eligible, which claim steps of "collecting data describing [a] plurality of services" and "utilizing a graphical user interface" to

select data fields to "generat[e] a single record." App. 37a. The Court explained in *Electric Power Group* that, "[t]hough lengthy and numerous, the claims do not go beyond requiring the collection, analysis, and display of available information in a particular field, stating those functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology." *Id.* at 1351. The claims below are no different. Certiorari should be granted to stop these facially-inconsistent, panel-dependent outcomes.

C. Whether the Claims Have Been Construed Should Not Be Probative of Patent Eligibility

The Federal Circuit justified its approach in part on the fact that an earlier claim construction relied on the specification. But patent eligibility should not turn on the presence, absence, or particulars of a claim construction ruling.

Patent eligibility should rise or fall based on whether a patent has *claimed* an abstract idea or contains specific inventive elements—not on whether a court or the parties have put a gloss on specific claim terms during the course of litigation. After all, patent eligibility can be and often is assessed before claim construction has even occurred. And the presence of broad, abstract claim language will be a drag on innovation; the prospect that the language may one day be construed more narrowly than it appears does not relieve the damage that broad claims do to the patent system. *Cf. Mayo*, 132 S. Ct. at 1301-02. That is why the eligibility analysis has always focused on the claim language itself.

Further, a narrowed abstract claim remains an abstract claim; the narrowing does not somehow make it patent eligible. *See*, *e.g.*, *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1321 (Fed. Cir. 2016) ("A narrow claim directed to an abstract idea, however, is not necessarily patent-eligible, for while preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility."); *Synopsys*, 839 F.3d at 1151 ("A claim for a new abstract idea is still an abstract idea," and "[t]he search for a § 101 inventive concept is . . . distinct from demonstrating § 102 novelty.").

The claim construction here was typical of claim constructions that narrow the scope of an abstract claim based on disclosures in the specification but leave the claim abstract. The district court looked to the specification to "define the outer limits of the claim term." *Amdocs*, 761 F.3d at 1340. Nothing in the claim construction made the claimed concept of "enhancing" data less functional or less abstract. It did not import into the claim any technical elements from the specification; it merely identified the location where the data records would be "enhanced" under the claim.

The requirement that a claim must recite specific inventive elements in addition to the claimed abstract idea "cannot be circumvented by attempting to limit the use of [a] formula to a particular technological environment" or the performance of an abstract idea to a specific location. *Flook*, 437 U.S. at 584. And that is all that the claim construction did here—it clarified that a settled data compilation process would occur in a specific location. The construction did not transform the abstract

claim into something patent eligible. Indeed, "nothing is better settled in this court than that the application of an old process to a new and analogous purpose does not involve invention, even if the new result had not before been contemplated." *Ansonia Brass & Copper Co. v. Elec. Supply Co.*, 144 U.S. 11, 18 (1892). That the patents purport to be useful in tracking data generated on the internet thus does not alone provide an inventive concept. "[I]f a claim is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is nonstatutory." *Flook*, 437 U.S. at 595.

In the end, it is the claims that must establish patent eligibility—and not the specification, whether that specification is referenced directly or smuggled through a claim construction. Certiorari should thus be granted for this reason as well: to ensure that a reference to a specification during claim construction is not used as a backdoor for upholding otherwise abstract patent claims.

II. Clarifying the Application of the *Alice*/*Mayo* Framework Is Vitally Important

The Court's resolution of the issues raised in this petition is vitally important given the prevalence of patent eligibility issues in patent litigation, and the effect that incorrect decisions can have on further innovation. *See supra*, Section I.A.3. Since *Alice* was decided in 2014, there have been at least 392 district court decisions evaluating the patent eligibility of 862 patents covering 24,496 patent claims. Robert R. Sachs *et al.*, *#Alicestorm: April Update and the Impact of TC Heartland on Patent Eligibility* (June 1, 2017), http://www.bilskiblog.com/

blog/2017/06/ alicestorm-april-update-and-the-impact-of-tc-heartland.html.

1. Lower courts want more clarity on how to implement the two-part test for eligibility established in *Alice*. For example, one court recently asked for "practical guidance" about how to "distinguish[] software and computer patents that are valid under § 101 from those that are not." *Synchronoss Techs.*, *Inc. v. Dropbox Inc.*, No. 16-cv-00119-HSG (N.D. Cal. Dec. 22, 2016). Another has described the *Alice* analysis as a "difficult exercise" absent additional direction. *Device Enhancement LLC v. Amazon.com*, *Inc.*, 189 F. Supp. 3d 392, 400-401 (D. Del. 2016).

The additional direction should not come from the decision below, which parts ways with decades of precedent by looking beyond the claims of a patent to find inventive concepts. Yet the decision below has already been used to uphold the type of vague patents *Alice* and *Bilski* were meant to eradicate. *See Vermint Sys.*, *Inc. v. Red Box Recorders Ltd.*, 226 F. Supp. 3d 190, 198 (S.D.N.Y. 2016) (citing decision below to find that "Claim 1 may initially appear to be a relatively simple method—but it must be read in light of its limitations and against the parameters outlined in the specification."); *accord Finjan*, *Inc. v. Blue Coat Sys.*, *LLC*, 2016 U.S. Dist. Lexis 173116 (N.D. Cal. Dec. 13, 2016) ("This case presents an interesting scenario where the claims themselves are basic and broad, but significant clarifying detail is provided in a specification."). Certiorari should be granted to ensure a return to the fundamental principle that patent eligibility rises and falls based on the level of detail in the claims.

2. Members of the patent bar have similarly called for the Court to provide further guidance on the implementation of the *Alice/Mayo* framework. The American Bar Association Section of Intellectual Property Law, American Intellectual Property Law Association, and Pharmaceutical Research and Manufacturers of America have all cited the "confusion caused by recent court rulings on patent-eligibility" and observed that "lower courts and the USPTO have struggled to implement the Supreme Court's test in a predictable and consistent manner." Ryan Davis, *IP, Pharma Groups Call For Patent Eligibility Law Overhaul*, Law360, (Jan. 30, 2017), https://www.law360.com/articles/884771/ip-pharma-groups-call-for-patent-eligibility-law-overhaul.

In fact, IBM's chief patent counsel has declared that "right now there's no bigger issue" than patent eligibility under Section 101. *See* Richard Lloyd, *Whether it's reformed or abolished something needs to be done about 101*, iAM (Intellectual Property Asset Management) Blog, Apr. 15, 2016, http://www.iam-media.com/blog/detail.aspx?g=bf931c59-698b-4114-8b87-31a1ceb226c9. Michelle Lee, the former director of the U.S. Patent & Trademark Office, has similarly called for "greater clarity on [this] issue." *Id.*

This case provides an ideal opportunity to answer these calls and provide additional guidance to the courts, the patent bar, and the public, so that cutting-edge innovations are not suppressed by the standard announced below.

CONCLUSION

For the foregoing reasons, the Court should grant this petition for a writ of certiorari.

Respectfully submitted,

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July 24, 2017

APPENDIX

APPENDIX A — OPINION OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT, FILED NOVEMBER 1, 2016

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2015-1180

AMDOCS (ISRAEL) LIMITED,

Plaintiff-Appellant

v.

OPENET TELECOM, INC.,
OPENET TELECOM LTD.,

Defendants-Appellees

Appeal from the United States District Court for the Eastern District of Virginia in No. 1:10-cv-00910-LMBTRJ, Judge Leonie M. Brinkema.

November 1, 2016, Decided

Before NEWMAN, PLAGER, and REYNA, *Circuit Judges.*
Opinion for the court filed by *Circuit Judge* PLAGER.
Dissenting opinion filed by *Circuit Judge* REYNA.

PLAGER, *Circuit Judge.*

This is a patent case, in which the outcome turns on the application of the 'abstract idea' test, a judicially-created

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limitation on patent eligibility under § 101 of the Patent Act, 35 U.S.C. § 101. Plaintiff-Appellant Amdocs (Israel) Limited ("Amdocs") sued Defendants-Appellees Openet Telecom, Inc. and Openet Telecom Ltd. (collectively, "Openet") for infringing four U.S. Patents, Nos. 7,631,065 ("'065 patent"); 7,412,510 ("'510 patent"); 6,947,984 ("'984 patent"); and 6,836,797 ("'797 patent"). In the wake of *Alice Corp. v. CLS Bank International*, 134 S. Ct. 2347, 189 L. Ed. 2d 296 (2014), the district court granted Openet's motion for judgment on the pleadings, finding that the patents were not directed to patent eligible subject matter under § 101. Amdocs appeals.

For the reasons we shall explain, we reverse and remand for further proceedings.

BACKGROUND

Prosecution History and Technology

Although we need not recapitulate every detail of these patents, we describe them sufficiently for purposes of this opinion. Additional background is available in our opinion from the prior appeal in this case. *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 761 F.3d 1329, 1331-36 (Fed. Cir. 2014) ("*Amdocs I*").

The patents in suit concern, inter alia, parts of a system designed to solve an accounting and billing problem faced by network service providers. Each patent descends from U.S. Patent Application No. 09/442,876, which issued as U.S. Patent No. 6,418,467. One of the patents in suit, the '797 patent, issued as a result of a continuation-in-part

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application, while the other three patents issued as a result of continuation applications.

The '065 patent concerns a system, method, and computer program for merging data in a network-based filtering and aggregating platform as well as a related apparatus for enhancing networking accounting data records. The '510 patent concerns a system, method, and computer program for reporting on the collection of network usage information. The '984 patent concerns a system and accompanying method and computer program for reporting on the collection of network usage information from a plurality of network devices. The '797 patent concerns a system, method, and computer program for generating a single record reflecting multiple services for accounting purposes.

Each patent's written description describes the same system, which allows network service providers to account for and bill for internet protocol ("IP") network communications. The system includes network devices; information source modules ("ISMs"); gatherers; a central event manager ("CEM"); a central database; a user interface server; and terminals or clients. *See, e.g.*, '065 patent at 4:29-33, 43-54.

Network devices represent any devices that could be included on a network, including application servers, and also represent the source of information accessed by the ISMs. *Id.* at 5:10-26. The ISMs act as an interface between the gatherers and the network devices and enable the gatherers to collect data from the network devices. *Id.*

at 5:33-35. The ISMs represent modular interfaces that send IP usage data in real time from network devices to gatherers. *Id.* at 5:35-39. Gatherers can be hardware and software installed on the same network segment as a network device or on an application server itself to minimize the data traffic impact on a network; gatherers "gather the information from the ISMs." *Id.* at 6:54, 58-64. Gatherers also normalize data from the various types of ISMs and serve as a distributed filtering and aggregation system. *Id.* at 7:5-8. The CEM provides management and control of the ISMs and gatherers, and the CEM can perform several functions including performing data merges to remove redundant data. *Id.* at 8:13-67. The central database is the optional central repository of the information collected by the system and is one example of a sink for the data generated by the system. *Id.* at 9:1-5. The user interface server allows multiple clients or terminals to access the system, and its primary purpose is to provide remote and local platform independent control for the system. *Id.* at 10:5-12.

Importantly, these components are arrayed in a distributed architecture that minimizes the impact on network and system resources. *Id.* at 3:56-65. Through this distributed architecture, the system minimizes network impact by collecting and processing data close to its source. *Id.* The system includes distributed data gathering, filtering, and enhancements that enable load distribution. *Id.* at 4:33-42. This allows data to reside close to the information sources, thereby reducing congestion in network bottlenecks, while still allowing data to be accessible from a central location. *Id.* at 4:35-39. Each

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patent explains that this is an advantage over prior art systems that stored information in one location, which made it difficult to keep up with massive record flows from the network devices and which required huge databases. *See, e.g., id.* at 4:39-42.

Procedural History

In 2010, Amdocs sued Openet for patent infringement in the United States District Court for the Eastern District of Virginia. Amdocs asserted that Openet infringed claims 1, 4, 7, 13, and 17 of the '065 patent; claims 16, 17, and 19 of the '510 patent; claims 1, 2, 7, 8, and 13 of the '984 patent; and claims 1, 2, 7, 8, and 19 of the '797 patent.

In its answer and counterclaim, Openet alleged invalidity, unenforceability, and non-infringement. The parties filed motions addressing claim construction and summary judgment. The district court granted Openet's motion for summary judgment of non-infringement and Amdocs's motion for summary judgment of no inequitable conduct. Upon motions of the parties, which the court granted, certain claim constructions were made. However, the court denied the parties' motions for summary judgment with respect to validity. The court later issued an opinion explaining its bases for its non-infringement and inequitable conduct summary judgment rulings, while also providing its claim constructions. Amdocs appealed the trial court's judgment to this court.

On appeal, we affirmed two claim constructions and vacated and modified another construction. We approved

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of the district court's construction of "enhance" to mean "to apply a number of field enhancements in a distributed fashion." *Amdocs I*, 761 F.3d at 1338-40. In so doing, we approved of the district court's "reading the 'in a distributed fashion' and the 'close to the source' of network information requirements into the term 'enhance.'" *Id.* at 1340. We also approved of the construction of "completing" to mean "enhance a record until all required fields have been populated." *Id.*

However, we vacated the district court's construction of "single record represents each of the plurality of services" as "one record that includes customer usage data for each of the plurality of services used by the customer on the network" but not including records that aggregated usage data. *Id.* We substituted a plain meaning interpretation that allowed for the inclusion of a plurality of services by aggregation. *Id.* at 1340-41. As a result, we reversed the grant of summary judgment with respect to the '065 patent, the '510 patent, and the '984 patent and vacated the grant of summary judgment with respect to the '797 patent. *Id.* at 1341-43.

During the time the case was before us on appeal from the district court, the Supreme Court issued its opinion in *Alice*. Following the remand from this court in *Amdocs I*, Openet moved for judgment on the pleadings by arguing that, pursuant to *Alice*, all asserted claims were ineligible under § 101. In response, Amdocs argued that Openet's motion was procedurally barred and contrary to the law of the case.

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The district court permitted the motion because it had not resolved whether the patents were directed to ineligible subject matter under § 101 and because, even if the issue had been addressed, the court stated that *Alice* "represented a change, or a significant clarification, of the law." *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 56 F. Supp. 3d 813, 819 (E.D. Va. 2014).

In due course, the district court granted Openet's motion and invalidated the asserted claims of all four patents as ineligible under § 101. Amdocs appeals. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

We review a grant of judgment on the pleadings under the procedural law of the regional circuit. *Allergan, Inc. v. Athena Cosmetics, Inc.*, 640 F.3d 1377, 1380 (Fed. Cir. 2011). The Fourth Circuit reviews a grant of judgment on the pleadings without deference, applying the same standard as a motion to dismiss pursuant to Fed. R. Civ. P. 12(b)(6). *Burbach Broad. Co. of Del. v. Elkins Radio Corp.*, 278 F.3d 401, 405-06 (4th Cir. 2002). Therefore, we assume the facts alleged in the complaint are true and draw all reasonable factual inferences in favor of the non-movant. *Id.* We review the district court's determination of patent eligibility under § 101 without deference, as a question of law. *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1255 (Fed. Cir. 2014).

Appendix A

1.

The Doctrine: The statutory rule governing patent eligibility—that is, the criteria for identifying inventions that are eligible to be patented—is found in § 101 of the Patent Act. As recodified by Congress in 1952, § 101 provides that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

It is obvious that the subject matter described in § 101 is expansive. As the Supreme Court has observed, the "subject-matter provisions of the patent law have been cast in broad terms to fulfill the constitutional and statutory goal of promoting 'the Progress of Science and the useful Arts.'" *Diamond v. Chakrabarty*, 447 U.S. 303, 315, 100 S. Ct. 2204, 65 L. Ed. 2d 144 (1980) (quoting U.S. Const. art. I, § 8, cl. 8).

Despite this broad mandate, judicial gloss on the law of patent eligibility has long recognized that certain fundamental principles are not included in that broad statutory grant. Though over the years these principles have been described in differing terms, in today's vernacular these exceptions are called "[l]aws of nature, natural phenomena, and abstract ideas." *Alice*, 134 S. Ct. at 2354 (quotation marks and citation omitted); *see also Le Roy v. Tatham*, 55 U.S. 156, 183, 14 L. Ed. 367 (1853) (Nelson, J., dissenting) (tracing the "proper subject-matter of a patent" to at least the British case of *Boulton v. Bull*, 2 H. Bl. 463, 126 Eng. Rep. 651 (C.P. 1795)).

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The two-step framework, set out by the Supreme Court for distinguishing patents that claim so-called laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts, is now familiar law. *See Alice*, 134 S. Ct. at 2355 (following *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 132 S. Ct. 1289, 182 L. Ed. 2d 321 (2012)). This framework is sometimes collectively referred to as *Alice/Mayo.*

First, we determine whether "the claims at issue are directed to one of those patent-ineligible concepts." *Id.* If so, we next consider elements of each claim both individually and "as an ordered combination" to determine whether the additional elements "'transform the nature of the claim' into a patent-eligible application." *Id.* (quoting *Mayo*, 132 S. Ct. at 1298, 1297).

The Court describes step two of this analysis as a search for an "inventive concept"—i.e., an element or ordered combination of elements that is "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself." *Id.* (quoting *Mayo*, 132 S. Ct. at 1294).

2.

The Cases: Our cases generally follow the step one/step two Supreme Court format, reserving step two for the more comprehensive analysis in search of the 'inventive concept.' Recent cases, however, suggest that there is considerable overlap between step one and

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step two, and in some situations this analysis could be accomplished without going beyond step one. *See Enfish, LLC, v. Microsoft Corp.*, 822 F.3d 1327, 1334-36 (Fed. Cir. 2016); *see also Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) ("the two stages involve overlapping scrutiny of the content of the claims . . . [and] there can be close questions about when the inquiry should proceed from the first stage to the second); *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016) ("[T]he claims and their specific limitations do not readily lend themselves to a step-one finding that they are directed to a nonabstract idea. We therefore defer our consideration of the specific claim limitations' narrowing effect for step two.").

Whether the more detailed analysis is undertaken at step one or at step two, the analysis presumably would be based on a generally-accepted and understood *definition* of, or test for, what an 'abstract idea' encompasses. However, 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. The problem with articulating a single, universal definition of 'abstract idea' is that it is difficult to fashion a workable definition to be applied to as-yet-unknown cases with as-yet-unknown inventions. That is not for want of trying; to the extent the efforts so far have been unsuccessful it is because they often end up using alternative but equally abstract terms or are overly narrow.[1]

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1. For examples, compare *In re Bilski*, 545 F.3d 943, 955-56 (Fed. Cir. 2008) (en banc), reaffirming 'machine-or-transformation'

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Instead of a definition, then, the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided. *See, e.g., Elec. Power Grp.*, 830 F.3d at 1353-54.[2] That is the classic common law methodology for creating law when a single governing definitional context is not available. *See generally* Karl N. Llewellyn, The Common Law Tradition: Deciding Appeals (1960). This more flexible approach is also the approach employed by the Supreme Court. *See Alice*, 134 S. Ct. at 2355-57. We shall follow that approach here.

The dissent, in its discussion of the majority opinion's approach, states that the analysis in which the majority engages involves a comparison "of the asserted claims in this case to the claims at issue in some, but not all, of the cases where we have addressed patent eligibility." Dissent at 1. As earlier noted, applying prior precedents

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as *the* § 101 test for process claims, with *Bilski v. Kappos*, 561 U.S. 593, 604, 130 S. Ct. 3218, 177 L. Ed. 2d 792 (2010), indicating that 'machine-or-transformation' is perhaps one possible test, but not the only one. See also the several opinions in this court's *CLS Bank International v. Alice Corp.*, 717 F.3d 1269 (Fed. Cir. 2013) (en banc).

2. See also Robert W. Bahr, Deputy Comm'r for Patent Examination Policy, USPTO, Recent Subject Matter Eligibility Decisions (*Enfish, LLC v. Microsoft Corp. and TLI Commc'ns LLC v. A.V. Automotive, LLC*) (2016) at 2: "In summary, when performing an analysis of whether a claim is directed to an abstract idea (Step 2A), examiners are to continue to determine if the claim recites (i.e., sets forth or describes) a concept that is similar to concepts previously found abstract by the courts."

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of the court to the current case is indeed the common law approach for deciding cases, including patent cases—i.e., applying the law to comparable facts. *See, e.g., Alice*, 134 S. Ct. at 2355-60 (relying on precedent with respect to step one and step two); *Elec. Power Grp.*, 830 F.3d at 1353-56 (same). Furthermore, discussing in an opinion only the most relevant prior opinions, rather than every prior opinion in an actively-litigated field, is a necessary discipline if opinions are to be read, rather than just written.

The dissent offers a different paradigm for identifying an abstract idea: "it is apparent that a desired goal (i.e., a 'result or effect'), absent structural or procedural means for achieving that goal, is an abstract idea." Dissent at 6-7. The dissent focuses on the difference between 'means' and 'ends.' *Id.* at 6. We note that, though not in terms of 'abstract idea' but rather adequacy of definition, years ago the Supreme Court outlawed such broad 'ends' or function claiming as inconsistent with the purposes of the Patent Statute.[3] Congress, however, a few years later softened the rule. Patentees could write claim language to broadly describe the purpose or function of their invention, and when they did the claim would not cover the bare function or goal, however performed, but only as limited to the particular means (and equivalents) for implementing that function or goal as described by the patentee in the patent's "specification."

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3. *See Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1, 67 S. Ct. 6, 91 L. Ed. 3, 1946 Dec. Comm'r Pat. 628 (1946).

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This, of course, is the "means-plus-function" practice codified in 35 U.S.C. § 112 ¶ 6 (now § 112(f)). The dissent's paradigm would seem similar, but differs in significant respects. Though § 112 ¶ 6 permits the 'means' to be found in the patentee's "specification," meaning the written description and the claims of the patent, the dissent would save the patent's eligibility under § 101 only if the claim at issue itself explicitly states the necessary 'means.' In the dissent's step two, we must find "a particular means for accomplishing an underlying goal" through careful "limitation-by-limitation analysis" of the claim. *Id.* at 9. We commend the dissent for seeking a creative way of incorporating aspects of well-known doctrine in the search for what is an 'abstract idea,' but that is not now the law, either in statute or in court decision.[4] At best, as this court has previously stated, the dissent's analysis may be "one helpful way of double-checking the application of the Supreme Court's framework to particular claims—specifically, when determining whether the claims meet the requirement of an inventive concept *in application.*" *Elec. Power Grp.*, 830 F.3d at 1356.

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4. We state our concern lest the dissent's generalizations of law may mislead the reader. In the complexities of § 101, the law is evolving into greater certitude based on experience, not on generalizations. Words out of context are less useful—especially if inapt. For example, the Court's rejection of Samuel Morse's notorious claim 8, regarding the use of electromagnetism, was for overbroad preemption of a natural law, not because it was an "abstract idea." *See, e.g., Mayo*, 132 S. Ct. at 1294 (citing *O'Reilly v. Morse*, 56 U.S. 62, 112-20, 14 L. Ed. 601 (1854)).

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3.

We begin, then, with an examination of eligible and ineligible claims of a similar nature from past cases. For example, in *Digitech*, one of the representative claims described a process of organizing information through mathematical correlations with merely generic gathering and processing activities. *See Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014). The claim at issue:

> A method of generating a device profile that describes properties of a device in a digital image reproduction system for capturing, transforming or rendering an image, said method comprising:
>
> generating first data for describing a device dependent transformation of color information content of the image to a device independent color space through use of measured chromatic stimuli and device response characteristic functions;
>
> generating second data for describing a device dependent transformation of spatial information content of the image in said device independent color space through use of spatial stimuli and device response characteristic functions; and
>
> combining said first and second data into the device profile.

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Id. at 1351 (quoting patent at issue).

While the court did not parse the analysis into discrete step one and step two stages, it found that this claim recited an "ineligible abstract process of gathering and combining data that does not require input from a physical device" and that "the two data sets and the resulting device profile are ineligible subject matter." *Id.* The court observed that "[w]ithout additional limitations, a process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible." *Id.* The court determined that the claim was ineligible.

Similarly, in *Content Extraction*, the court examined a representative claim reciting:

> A method of processing information from a diversity of types of hard copy documents, said method comprising the steps of:
>
> (a) receiving output representing a diversity of types of hard copy documents from an automated digitizing unit and storing information from said diversity of types of hard copy documents into a memory, said information not fixed from one document to the next, said receiving step not preceded by scanning, via said automated digitizing unit, of a separate document containing format requirements;

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    (b) recognizing portions of said hard copy documents corresponding to a first data field; and

    (c) storing information from said portions of said hard copy documents corresponding to said first data field into memory locations for said first data field.

Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n, 776 F.3d 1343, 1345 (Fed. Cir. 2014).

    Under step one, the court characterized all of the claims at issue (which were similar to the representative claim) as being directed to the abstract idea of "1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory." *Id.* at 1347. The court commented that data collection, recognition, and storage were "undisputedly well-known." *Id.* Under step two, the court found no limitations[5] that, considered alone and in an ordered combination, transformed the claim into a patent-eligible application of an abstract idea. *Id.* at 1347-48. The court observed that the role of a computer in a computer-implemented invention would only be meaningful in a § 101 analysis if it involved more than the performance of "well-understood, routine, [and] conventional activities previously known to the industry." *Id.* (quoting *Alice*, 134

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    5. Though the Supreme Court does not uniformly adhere to the practice, this court often has used the term "limitation" to refer to requirements stated in a patent claim, and the term "element" to refer to the parts of an entity accused of infringing. We will follow that practice here.

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S. Ct. at 2359). The court noted that all of the limitations at issue involved well-known, routine, and conventional functions of computers and scanners. *Id.* at 1348-49. The claims were ineligible.§ More recently, in *In re TLI*, the court examined a representative claim that recited:

> A method for recording and administering digital images, comprising the steps of:
>
> recording images using a digital pick up unit in a telephone unit,
>
> storing the images recorded by the digital pick up unit in a digital form as digital images,
>
> transmitting data including at least the digital images and classification information to a server, wherein said classification information is prescribable by a user of the telephone unit for allocation to the digital images,
>
> receiving the data by the server,
>
> extracting classification information which characterizes the digital images from the received data, and
>
> storing the digital images in the server, said step of storing taking into consideration the classification information.

In re TLI Commc'ns LLC Patent Litig., 823 F.3d 607, 610 (Fed. Cir. 2016).

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Under step one, the court found that the claims were directed to the abstract idea of "classifying and storing digital images in an organized manner." *Id.* at 613. Also under step one, the court found that the claims were not directed to a specific improvement in computer functionality, but instead were directed to the "use of conventional or generic technology in a nascent, but well-known environment, without any claim that the invention reflect[ed] an inventive solution to any problem presented by combining the two." *Id.* at 612. Under step two, the court found that the claims did not recite any limitations that when considered individually and as an ordered combination transformed the abstract idea into a patent-eligible application of that idea. Instead, the recited components and functions were well-understood, routine, conventional activities previously known in the industry. *See id.* at 613-14. The components were described in "vague, functional" terms that were insufficient to confer eligibility and failed to provide the requisite details to implement the claimed abstract idea. *Id.* at 615.

The ineligible claims in the preceding cases[6] may be contrasted with eligible claims in other cases. For

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6. For additional examples of ineligible claims post-*Alice*, see, e.g., *FairWarning IP, LLC v. Iatric Systems, Inc.*, No. 15-1985, 839 F.3d 1089, 2016 U.S. App. LEXIS 18313, 2016 WL 5899185 (Fed. Cir. Oct. 11, 2016); *Intellectual Ventures I LLC v. Symantec Corp.*, No. 15-1769, 838 F.3d 1307, 2016 U.S. App. LEXIS 17695, 2016 WL 5539870 (Fed. Cir. Sept. 30, 2016); *Affinity Labs of Texas, LLC v. DirecTV, LLC*, No. 15-1845, 838 F.3d 1253, 2016 U.S. App. LEXIS 17371, 2016 WL 5335501 (Fed. Cir. Sept. 23, 2016); *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, No. 15-2080, 838 F.3d 1266, 2016 U.S. App. LEXIS 17370, 2016 WL 5335502 (Fed. Cir. Sept. 23, 2016); *Electric Power Group*, 830 F.3d 1350.

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example, in *DDR Holdings*, the court found that the asserted claims did not recite a step or function performed by a computerized mathematical algorithm but were instead focused on a challenge particular to the Internet. *DDR Holdings*, 773 F.3d at 1257. The representative claim recited:

> A system useful in an outsource provider serving web pages offering commercial opportunities, the system comprising: (a) a computer store containing data, for each of a plurality of first web pages, defining a plurality of visually perceptible elements, which visually perceptible elements correspond to the plurality of first web pages;
>
> (i) wherein each of the first web pages belongs to one of a plurality of web page owners;
>
> (ii) wherein each of the first web pages displays at least one active link associated with a commerce object associated with a buying opportunity of a selected one of a plurality of merchants; and
>
> (iii) wherein the selected merchant, the outsource provider, and the owner of the first web page displaying the associated link are each third parties with respect to one other;
>
> (b) a computer server at the outsource provider, which computer server is coupled to the computer store and programmed to:

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(i) receive from the web browser of a computer user a signal indicating activation of one of the links displayed by one of the first web pages;

(ii) automatically identify as the source page the one of the first web pages on which the link has been activated;

(iii) in response to identification of the source page, automatically retrieve the stored data corresponding to the source page; and

(iv) using the data retrieved, automatically generate and transmit to the web browser a second web page that displays: (A) information associated with the commerce object associated with the link that has been activated, and (B) the plurality of visually perceptible elements visually corresponding to the source page.

Id. at 1249-50.

The court observed that the "claimed solution [was] necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." *Id.* at 1257. Analyzing the claims under step two, the court noted when the claim limitations were taken together as an ordered combination, they recited an invention that was not merely "the routine or conventional use of the Internet." *Id.* at 1259.

More recently, in *BASCOM*, the court examined several claims including the following claim:

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1. A content filtering system for filtering content retrieved from an Internet computer network by individual controlled access network accounts, said filtering system comprising:

a local client computer generating network access requests for said individual controlled access network accounts;

at least one filtering scheme;

a plurality of sets of logical filtering elements;

and a remote ISP server coupled to said client computer and said Internet computer network, said ISP server associating each said network account to at least one filtering scheme and at least one set of filtering elements, said ISP server further receiving said network access requests from said client computer and executing said associated filtering scheme utilizing said associated set of logical filtering elements.

BASCOM, 827 F.3d at 1345.

In *BASCOM* , the court found that the claims were directed to an abstract idea under step one. *Id.* at 1347-49. Under step two, the court construed the claims in favor of the non-movant and found that the limitations of the claims, taken individually, recited generic computer, network, and Internet components which were not

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inventive by themselves. *Id.* at 1349-52. However, the court found that the ordered combination of these limitations provided the requisite inventive concept. *Id.* The claimed and described inventive concept was the "installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user." *Id.* at 1350. This design permitted the filtering tool to have "both the benefits of a filter on a local computer and the benefits of a filter on the [Internet Service Provider] server." *Id.* This was not conventional or generic, and the claims did not preempt all ways of filtering content on the Internet—instead, the patent claimed and explained how a particular arrangement of elements was "a technical improvement over prior art ways of filtering such content." *Id.* The court thus distinguished ineligible "abstract-idea-based solutions[s] implemented with generic technical components in a conventional way" from the eligible "technology-based solution" and "'software-based invention[ ] that improve[s] the performance of the computer system itself.'" *Id.* at 1351 (citation omitted). The court therefore vacated the district court's dismissal under Fed. R. Civ. P. 12(b)(6).[7]

4.

With this background in mind, we turn to an examination of the claims in the patents at issue to determine whether the trial court was correct in ruling

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7. For additional examples of eligible claims post-*Alice*, see *McRO, Inc. v. Bandai Namco Games America Inc.*, No. 15-1080, 837 F.3d 1299, 2016 U.S. App. LEXIS 16703, 2016 WL 4896481 (Fed. Cir. Sept. 13, 2016); *Enfish*, 822 F.3d 1327.

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them all to be invalid under § 101. In addition to taking into consideration the approved claim constructions, we examine the claims in light of the written description. *See, e.g., Enfish*, 822 F.3d at 1335 (applying step one involves considering the claims "in light of the specification"); *In re TLI Commc'ns*, 823 F.3d at 611-15 (examining the claims in light of the written description under steps one and two).

a. '065 Patent

Amdocs asserted claims 1, 4, 7, 13, and 17 of the '065 patent. Claim 1 is representative:

> 1. A computer program product embodied on a computer readable storage medium for processing network accounting information comprising:
>
> computer code for receiving from a first source a first network accounting record;
>
> computer code for correlating the first network accounting record with accounting information available from a second source; and
>
> computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.

'065 patent at 16:4-14.

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Under step one, the district court determined that this claim was directed to the abstract idea of "correlating two network accounting records to enhance the first record." *Amdocs*, 56 F. Supp. 3d at 820. Under step two, the district court found that claim 1 did not add a sufficient 'inventive concept' to confer eligibility.

We recognize, as the district court recognized, that "[*a*]*t some level*, 'all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.'" *Alice*, 134 S. Ct. at 2354 (quoting *Mayo*, 132 S. Ct. at 1293) (emphasis added). What relative level of abstraction should we employ? From a macroscopic perspective, claim 1 could be described as focusing on correlating two network accounting records to enhance the first record. Claim 1 could also be described in several other ways—such as focusing on a computer program that includes computer code for receiving initial information, for correlating that initial information with additional information, and for using that additional information to enhance the initial information.

We have previously explained that somewhat (at least facially) similar claims do not satisfy § 101—under either step one or step two. *See, e.g., Digitech*, 758 F.3d at 1350 (abstract idea of "organizing information through mathematical correlations"); *Content Extraction*, 776 F.3d at 1347 (abstract idea of "1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory"); *In re TLI Commc'ns*, 823 F.3d at 613 (abstract idea of "classifying and storing digital images in an organized manner").

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In contrast, we have found eligibility when somewhat facially-similar claims are directed to an improvement in computer functionality under step one, *see Enfish*, 822 F.3d at 1335, or recite a sufficient inventive concept under step two—particularly when the claims solve a technology-based problem, even with conventional, generic components, combined in an unconventional manner. *See DDR Holdings*, 773 F.3d at 1256-59; *see also BASCOM*, 827 F.3d at 1349-52.

In this case, the claims are much closer to those in *BASCOM* and *DDR Holdings* than those in *Digitech, Content Extraction*, and *In re TLI Commc'ns*. Indeed, even if we were to agree that claim 1 is directed to an ineligible abstract idea under step one, the claim is eligible under step two because it contains a sufficient 'inventive concept.' Claim 1 requires "computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record."'065 patent at 16:12-14. In *Amdocs I*, we construed "enhance" as being dependent upon the invention's distributed architecture. 761 F.3d at 1338-40 (quoting '065 patent at 7:51-57, 10:45-50, 7:7-8). We construed "enhance" as meaning "to apply a number of field enhancements in a distributed fashion." *Id.* at 1340. We took care to note how the district court explained that "[i]n this context, 'distributed' means that the network usage records are processed close to their sources before being transmitted to a centralized manager." *Id.* at 1338. And we specifically approved of the district court's "reading the 'in a distributed fashion' and the 'close to the source' of network information requirements into the term 'enhance.'" *Id.* at 1340.

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As explained by the patent, this distributed enhancement was a critical advancement over the prior art:

> Importantly, the distributed data gathering, filtering and enhancements performed in the system 100 enables load distribution. Granular data can reside in the peripheries of the system 100, close to the information sources. This helps avoids [(*sic*)] reduce congestion in network bottlenecks but still allows the data to be accessible from a central location. In previous systems, all the network information flows to one location, making it very difficult to keep up with the massive record flows from the network devices and requiring huge databases.

'065 patent at 4:33-42.

In other words, this claim entails an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases). The solution requires arguably generic components, including network devices and "gatherers" which "gather" information. However, the claim's enhancing limitation necessarily requires that these generic components operate in an unconventional manner to achieve an improvement in computer functionality.

The enhancing limitation depends not only upon the invention's distributed architecture, but also depends

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upon the network devices and gatherers—even though these may be generic—working together in a distributed manner. The patent explains that field enhancements are defined by network service providers for each field in which the network service provider wants to collect data. '065 patent at 12:43-47. "A field enhancement specifies how the data obtained from the trigger of the enhancement procedure is processed before it is placed in a single field in the central database 175." *Id.* at 11:2-5.

> Typically, data collected from a single source does not contain all the information needed for billing and accounting, such as user name and organization. In such cases, the data is enhanced. By combining IP session data from multiple sources, such as authentication servers, DHCP and Domain Name servers, the gatherers create meaningful session records tailored to the [network service provider's] specific requirements.

Id. at 7:51-57.

The gatherers provide enhancement. *Id.* at 10:45-48 ("As mentioned above, the gatherers 220 provide data enhancement features to complete information received from the ISMs 210."). The gatherers also operate in a distributed fashion, *id.* at 4:33-42, and the gatherers depend upon the ISMs which receive information from network devices, *id.* at 5:10-26. Claim 1 includes the enhancing limitation which is individually sufficient for eligibility. But this enhancing limitation necessarily involves the arguably generic gatherers, network devices,

and other components working in an unconventional distributed fashion to solve a particular technological problem.

Claim 1 is therefore distinct from the ineligible claims in *Digitech, Content Extraction*, and *In re TLI Commc'ns*. The claim in *Digitech* was not tied to any particularized structure, broadly preempted related technologies, and merely involved combining data in an ordinary manner without any inventive concept. *See* 758 F.3d at 1350-51. In contrast, claim 1 of the '065 patent is tied to a specific structure of various components (network devices, gatherers, ISMs, a central event manager, a central database, a user interface server, and terminals or clients). It is narrowly drawn to not preempt any and all generic enhancement of data in a similar system, and does not merely combine the components in a generic manner, but instead purposefully arranges the components in a distributed architecture to achieve a technological solution to a technological problem specific to computer networks. *See* '065 patent at 4:29-33, 4:43-54, 3:56-65, 4:33-42, 7:51-57, 10:45-50, 7:7-8, 7:62-67, 11:1-7.

Similarly, claim 1 is distinct from the representative claim in *Content Extraction*, which involved the generic, well-known steps of collecting data, recognizing data, and storing data. *See* 776 F.3d at 1347. Unlike the claim in *Content Extraction*, claim 1 of the '065 patent depends upon a specific enhancing limitation that necessarily incorporates the invention's distributed architecture—an architecture providing a technological solution to a technological problem. This provides the requisite 'something more' than the performance of

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"well-understood, routine, [and] conventional activities previously known to the industry." *See id.* at 1347-48 (quoting *Alice*, 134 S. Ct. at 2359).

Claim 1 is similar to the claims in *DDR Holdings* and *BASCOM*. As in *DDR Holdings*, when the claim limitations were considered individually and as an ordered combination, they recited an invention that is not merely the "routine or conventional use" of technology. 773 F.3d at 1259. Here, claim 1 solves a technological problem (massive data flows requiring huge databases) akin to the problem in *DDR Holdings* (conventional Internet hyperlink protocol preventing websites from retaining visitors). *Cf. Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1371 (Fed. Cir. 2015). Claim 1 involves some arguably conventional components (e.g., gatherers), but the claim also involves limitations that when considered individually and as an ordered combination recite an inventive concept through the system's distributed architecture.

Claim 1 is also like the claims in *BASCOM* because even though the system in the '065 patent relies upon some arguably generic limitations, when all limitations are considered individually and as an ordered combination, they provide an inventive concept through the use of distributed architecture. This is similar to the design in *BASCOM* which permitted the invention to have a filtering tool with the benefits of a filter on a local computer and the benefits of a filter on an ISP server. The benefits in *BASCOM* were possible because of customizable filtering features at specific locations

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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. This arrangement is not so broadly described to cause preemption concerns. Instead, it is narrowly circumscribed to the particular system outlined. As in *BASCOM*, this is a technical improvement over prior art technologies and served to improve the performance of the system itself.

For all these reasons, and with the understanding that claim 1 is representative, we reverse the district court's judgment that claims 1, 4, 7, 13, and 17 of the '065 patent are ineligible under § 101.

b. '510 Patent

Amdocs asserted claims 16, 17, and 19 of the '510 patent. Claim 16 is representative:

> 16. A computer program product stored in a computer readable medium for reporting on a collection of network usage information from a plurality of network devices, comprising:
>
> computer code for collecting network communications usage information in real-time from a plurality of network devices at a plurality of layers;
>
> computer code for filtering and aggregating the network communications usage information;

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computer code for completing a plurality of data records from the filtered and aggregated network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;

computer code for storing the plurality of data records in a database;

computer code for submitting queries to the database utilizing predetermined reports for retrieving information on the collection of the network usage information from the network devices; and

computer code for outputting a report based on the queries;

wherein resource consumption queries are submitted to the database utilizing the reports for retrieving information on resource consumption in a network; and

wherein a resource consumption report is outputted based on the resource consumption queries.

'510 patent at 17:3-29.

   This claim is eligible for patenting for reasons similar to those that undergirded the eligibility of the '065 patent claims. In this instance, the district court concluded

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under step one that claim 16 was directed to an abstract idea—"using a database to compile and report on network usage information" without any sufficient 'inventive concept' under step two. *Amdocs*, 56 F. Supp. 3d at 822-23. However, contrary to the district court's analysis, even if claim 16 were directed to an abstract idea under step one, the claim is eligible under step two.

Claim 16 requires, inter alia, that the network usage information is collected in real-time from a plurality of network devices at a plurality of layers and is filtered and aggregated before being completed into a plurality of data records. In *Amdocs I*, we approved of the district court's construction of "completing" to mean "enhance a record until all required fields have been populated," in which "enhance" carried the same meaning as the same term in the '065 patent. 761 F.3d at 1340.

The collection, filtering, aggregating, and completing steps all depend upon the invention's unique distributed architecture—the same architecture outlined in our earlier analysis of the '065 patent. An understanding of how this is accomplished is only possible through an examination of the claims in light of the written description.

The written description explains that the distributed architecture allows the system to efficiently and accurately collect network usage information in a manner designed for efficiency to minimize impact on network and system resources. This enables load distribution, and that is an advantage over the prior art because it makes it easier to keep up with record flows and allows for smaller databases. '510 patent at 3:60-65 ("The system is based

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on a modular, distributed, highly scalable architecture capable of running on multiple platforms. Data collection and management is designed for efficiency to minimize impact on the network and system resources. The system minimizes network impact by collecting and processing data close to its source."), 4:20-21 ("Distributed filtering and aggregation eliminates system capacity bottlenecks."), 4:35-44 ("Importantly, the distributed data gathering, filtering and enhancement performed in the system 100 enables load distribution. Granular data can reside in the peripheries of the system 100, close to the information sources. This helps avoids [(*sic*)] reduce congestion in network bottlenecks but still allows the data to be accessible from a central location. In previous systems, all the network information flows to one location, making it very difficult to keep up with the massive record flows from the network devices and requiring huge databases."), 7:8-25 (describing how the gatherers act as a distributed filtering and aggregation system and how this improves scalability and efficiency of the system by reducing the volume of data sent to the CEM).

With this understanding, it is clear that even if claim 16 were viewed as being directed to an abstract idea under step one—rather than to an improvement in computer functionality—claim 16 satisfies step two. The collection, filtering, aggregating, and completing (including enhancing) steps all depend upon the system's unconventional distributed architecture. While some individual limitations arguably may be generic, others are unconventional and the ordered combination of these limitations yields an inventive concept sufficient to confer

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eligibility without undue preemption. The claim recites a technological solution to a technological problem specific to computer networks—an unconventional solution that was an improvement over the prior art. The claim is therefore more similar to the eligible claims in *DDR Holdings* and *BASCOM* than the ineligible claims in *Digitech, Content Extraction*, and *In re TLI Commc'ns.* For those reasons, and with the understanding that claim 16 is representative, we reverse the district court's judgment that claims 16, 17, and 19 of the '510 patent are ineligible under § 101.

c. '984 Patent

Amdocs alleged infringement of claims 1, 2, 7, 8, and 13 of the '984 patent. Claim 1 is representative:

> 1. A method for reporting on the collection of network usage information from a plurality of network devices, comprising:
>
> (a) collecting network communications usage information in real-time from a plurality of network devices at a plurality of layers utilizing multiple gatherers each including a plurality of information source modules each interfacing with one of the network devices and capable of communicating using a protocol specific to the network device coupled thereto, the network devices selected from the group consisting of routers, switches, firewalls, authentication servers, web hosts, proxy servers, netflow servers, databases, mail servers, RADIUS

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servers, and domain name servers, the gatherers being positioned on a segment of the network on which the network devices coupled thereto are positioned for minimizing an impact of the gatherers on the network;

(b) filtering and aggregating the network communications usage information;

(c) completing a plurality of data records from the filtered and aggregated network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;

(d) storing the plurality of data records in a database;

(e) allowing the selection of one of a plurality of reports for reporting purposes;

(f) submitting queries to the database utilizing the selected reports for retrieving information on the collection of the network usage information from the network devices; and

(g) outputting a report based on the queries.

'984 patent at 15:31-63.

Claim 1 is eligible for patenting for reasons similar to those already discussed with respect to the '065 and

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'510 patents. The district court concluded that claim 1 was directed to the abstract idea of "reporting on the collection of network usage information from a plurality of network devices" under step one and did not satisfy step two. *Amdocs*, 56 F. Supp. 3d at 824-25. However, even if we were to accept the district court's conclusion regarding step one, the claim is eligible under step two.

Claim 1 requires the completion of a plurality of data records in a manner that depends upon enhancement— which depends upon the system's distributed architecture, as explained previously. Similarly, claim 1 requires collecting, filtering, and aggregating information in a manner that also depends upon the system's distributed architecture. Claim 1 is therefore eligible for the same reasons that supported eligibility with respect to claim 16 of the '510 patent. The written description in both patents describes the collection, filtering, and aggregation in terms of the invention's distributed architecture. *See, e.g.*, '984 patent at 3:28-32, 3:56-57, 4:3-13, 6:45-54. Although some of the components and functions may appear generic, several limitations are individually unconventional (e.g., completing depends upon distributed enhancing) and the overall ordered combination of all of the limitations was unconventional. It produced the advantage over the prior art by solving the technological problem at stake. For those reasons, and with the understanding that claim 1 is representative, we reverse the district court's judgment that claims 1, 2, 7, 8, and 13 of the '984 patent are ineligible under § 101.

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d. '797 Patent

Amdocs alleged infringement of claims 1, 2, 7, 8, and 19 of the '797 patent. Claim 1 is representative:

> 1. A method for generating a single record reflecting multiple services for accounting purposes, comprising:
>
> (a) identifying a plurality of services carried out over a network;
>
> (b) collecting data describing the plurality of services; and
>
> (c) generating a single record including the collected data, wherein the single record represents each of the plurality of services;
>
> wherein the services include at least two services selected from a group consisting of a hypertext transfer protocol (HTTP) session, an electronic mail session, a multimedia streaming session, a voice over Internet Protocol (IP) session, a data communication session, an instant messaging session, a peer-to-peer network application session, a file transfer protocol (FTP) session, and a telnet session;
>
> wherein the data is collected utilizing an enhancement procedure defined utilizing a graphical user interface by:

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listing a plurality of available functions to be applied in real-time prior to end-user reporting,

allowing a user to choose at least one of a plurality of fields, and

allowing the user to choose at least one of the listed functions to be applied to the chosen field in real-time prior to the end-user reporting.

'797 patent at 16:30-37 and '797 Certificate of Correction.

Here again claim 1 is eligible for patenting for reasons similar to those discussed with respect to the claims in the '065, '510, and '984 patents. The district court found that claim 1 was directed to the abstract idea of "generat[ing] a single record reflecting multiple services" under step one, without a sufficient 'inventive concept' under step two. *See Amdocs*, 56 F. Supp. 3d at 823-24. However, as with the other patents, even if we were to accept the district court's step one conclusion, the claim is eligible under step two.

As with the other patents, the collecting, generating, and enhancement procedure required by claim 1 all depend upon the system's distributed architecture. Regarding collection, see, e.g., '797 patent at 5:39-45 ("The system is based on a modular, distributed, highly scalable architecture capable of running on multiple platforms. Data collection and management is designed for efficiency to minimize impact on the network and system resources. The system minimizes network impact by collecting and processing data close to its source."). Regarding

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generating, we specifically construed the language "single record represents each of the plurality of services" as "one record that includes customer usage data for each of the plurality of services used by the customer on the network" such that the language allowed for the inclusion of a plurality of services by aggregation. *Amdocs I*, 761 F.3d at 1340-41. Aggregation depends upon the invention's distributed architecture. *See, e.g.*, '797 patent at 6:1-2 ("Distributed filtering and aggregation eliminates system capacity bottlenecks."), 8:64-67 ("The distributed data filtering and aggregation eliminates capacity bottlenecks improving the scalability and efficiency of the system 800 by reducing the volume of data sent on the network to the CEM 870."), 9:1-4 ("Aggregation can be done by accumulating groups of data record flows, generating a single data record for each group. That single record then includes the aggregated information. This reduces the flow of the data records."), 9:36-40 ("The filtering and aggregation reduces the amount of data that is stored in the central database 875 while not jeopardizing the granularity of data that is necessary in order to create creative usage-based products.").

Finally, enhancement procedures are described in terms of enhancement. *See, e.g., id.* at 9:41-61 (describing enhancement procedures in the context of enhancements). Enhancement in the '797 patent, as in every other patent at issue, depends upon the distributed nature of the system. *See, e.g., id.* at 6:16-26 ("Importantly, the distributed data gathering, filtering and enhancements performed in the system 800 enables load distribution. Granular data can reside in the peripheries of the system

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800, close to the information sources. This helps avoids [(*sic*)] reduce congestion in network bottlenecks but still allows the data to be accessible from a central location. In previous systems, all the network information flows to one location, making it very difficult to keep up with the massive record flows from the network devices and requiring huge databases.").

Similar to the other examined claims in the patents at issue, representative claim 1 recites a series of limitations that, when considered individually and as an ordered combination, provide an inventive concept sufficient to confer eligibility. While the components and functionality necessarily involved in the '797 patent (e.g., ISMs, gatherers, network devices, collection, aggregation, and enhancement) may be generic at first blush, an examination of the claim in light of the written description reveals that many of these components and functionalities are in fact neither generic nor conventional individually or in ordered combination. Instead, they describe a specific, unconventional technological solution, narrowly drawn to withstand preemption concerns, to a technological problem.

For those reasons, and with the understanding that claim 1 is representative, we reverse the district court's judgment that claims 1, 2, 7, 8, and 19 of the '797 patent are ineligible under § 101.

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Summary

The dissent criticizes the majority for "avoid[ing] determining whether the asserted claims are directed to an abstract idea, or even identifying what the underlying abstract idea is." Dissent at 2. In fact, with regard to each of the challenged patents we identified the abstract idea that the district court found to be disqualifying. For argument's sake we accepted the district court's view of the disqualifying abstract ideas, and in each instance we then explained why, in our view, the claims seen in their entirety are not disqualified. The *Alice/Mayo* framework does not require more.

The dissent concedes that the written description discloses a network monitoring system "eligible for patenting. The specifications disclose a distributed system architecture comprising special-purpose components configured to cooperate with one another according to defined protocols . . . . The disclosed system is patent eligible." Dissent at 12. We agree. Unlike the dissent, however, we find the claims at issue, understood in light of that written description, to be eligible for patenting. To be clear: ruling these claims to be patent-eligible does not mean that they are valid; they have yet to be tested under the statutory conditions for patentability, e.g., §§ 102 (novelty) 103 (non-obvious subject matter), and the requirements of 112 (written description and enablement), issues raised in Openet's defensive pleadings.

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CONCLUSION

Accordingly, we reverse the district court's judgment that the claims at issue in the '065, '510, '984, and '797 patents are invalid under § 101 of the Patent Act.

We remand for the trial court to undertake further proceedings as called for by the issues as yet unaddressed, and such other proceedings as the court may deem appropriate.

REVERSED AND REMANDED

No costs.

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REYNA, *Circuit Judge*, dissenting.

The majority finds that the claims of all four asserted patents are directed to eligible subject matter. To make its determination, the majority undertakes "to examine earlier cases in which a parallel descriptive nature can be seen—what prior cases were about and which way they were decided." Majority Op. at 9-10. In application, the majority's approach involves the mechanical comparison of the asserted claims in this case to the claims at issue in some, but not all, of the cases where we have addressed patent eligibility after the Supreme Court's decision in *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355, 189 L. Ed. 2d 296 (2014).

The majority avoids determining whether the asserted claims are directed to an abstract idea, or even identifying what the underlying abstract idea is. I believe that approach to section 101 is contrary to the Supreme Court's direction in *Alice*, 134 S. Ct. at 2355 ("First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts."). Declining to engage in the step 1 inquiry also ignores and undermines this court's holdings in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), *McRO, Inc. v. Bandai Namco Games Am Inc.*, No. 2015-1080, 837 F.3d 1299, 2016 U.S. App. LEXIS 16703, 2016 WL 4896481 (Fed. Cir. Sept. 13, 2016), *Affinity Labs of Texas, LLC v. DirecTV, LLC*, No. 2015-1845, 838 F.3d 1253, 2016 U.S. App. LEXIS 17371, 2016 WL 5335501 (Fed. Cir. Sept. 23, 2016), and *Affinity Labs of Texas, LLC v. Amazon. com Inc.*, No. 2015-2080, 838 F.3d 1266, 2016 U.S. App. LEXIS 17370, 2016 WL 5335502 (Fed. Cir. Sept. 23, 2016).

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The majority also relies on the specification to import innovative limitations into the claims at issue. For each of the four patents at issue, the majority's eligibility determination rests on the use of a "distribution architecture." As explained below, however, this limitation is insufficient to satisfy *Alice* step two. Indeed, that limitation does not exist in all of the claims at issue. This contravenes the fundamental principal that the section 101 inquiry is about whether the claims are directed to a patent-eligible invention, not whether the specification is so directed. *See Synopsys, Inc. v. Mentor Graphics Corp.*, No. 2015-1599, 839 F.3d 1138, 2016 U.S. App. LEXIS 18561, 2016 WL 6068920, *20-21 (Oct. 17, 2016) ("The § 101 inquiry must focus on the language of the Asserted Claims themselves. . . . complex details from the specification cannot save a claim directed to an abstract idea that recites generic computer parts.") (citing *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013)).

Because I do not agree that the '065 and '797 patents are § 101 eligible, nor with the basis expressed by the majority for finding all four patents subject matter eligible under § 101, I *dissent*.

Background

The patents-in-suit disclose a system for monitoring activity on computer networks and for creating accounting records reflecting the activity.[1] The system gathers raw

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1. All the patents are descendant from U.S. Pat. No. 6,418,467 and they share its common specification, with some variation not

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activity data from various devices on the network (e.g., "routers, switches, firewalls, authentication servers, LDAP, Web hosts, DNS, and other devices"), and it uses that raw activity data to derive the desired accounting records. '984 patent at col. 2 l. 65-col. 3 l. 11. In certain embodiments, the system stores the records in a central database, which the network provider can use, for example, for purposes such as billing, operational support, fraud detection, network monitoring, traffic engineering, and the like. *Id.* at col. 3 ll. 20-27, col. 8 l.40-col. 9 l. 41; '797 patent at col. 3-16-20.

Rather than storing all the raw data in a central database, as in prior art systems, the disclosed system uses a distributed architecture to process the raw data in parallel, closer to the points of collection. The system associates a distinct Information Source Module ("ISM") with each network device that records relevant activity data. *Id.* at col. 5 ll. 3-17. The network devices include any devices in the network. *Id.* at col. 4 ll. 49-50. The ISMs are software components that "represent modular, abstract interfaces that are designed to be platform neutral." *Id.* at col. 5 ll. 6-8.

Each ISM collects data from the associated network device and passes the data to a respective "gatherer" component. *Id.* at col. 5 ll. 10-11. The gatherer component "can be any hardware and/or software," for gathering data from the ISMs and cooperating with other components

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relevant here. The '797 patent is a continuation-in-part that contains additional disclosure concerning the content of the accounting records. *See* '797 patent at col. 2 l. 33—col. 6 l. 9.

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to process the data to form the desired records. *Id.* at col. 6 ll. 25-31. To reduce the additional network traffic created by the monitoring, each gatherer is preferably placed logically or physically near the network devices from which it collects information. *Id.* at col. 6 ll. 32-35.

To derive the values necessary to create the desired accounting records, a gatherer may manipulate the raw data it receives from the ISM by filtering, aggregating, and/or "enhancing" the data. *Id.* at col. 6 ll. 25—col. 7 ll. 50, col. 10 ll. 13—col. 11 ll. 35. "Enhancing" includes "applying zero or more functions" to a value before storing the resulting value in a field of the record. *Id.* at col. 10 ll. 63-65. For instance, simply placing a raw value in the record is referred to as "one-step field enhancement." *Id.* at col. 10 ll. 66-67. In contrast, using the raw value to query another ISM for the value to place in the record is an example of "two-step field enhancement." *Id.* at col. 11 ll. 3-7. A gatherer may "enhance" the data through any number of steps.

A Central Event Manager ("CEM") provides centralized control and management of the system. *Id.* at col. 7 ll. 51—col. 8 ll. 39. The CEM provides a graphical user interface for system administrators to query the central database or to configure the system. *Id.* at col. 9 ll. 42-60. For example, administrators can use the user interface to define enhancement procedures for implementation by the gatherers and ISMs. *Id.* at col. 11 ll. 36—col. 13 ll. 30.

The patents explain that because the disclosed system distributes the work of collecting and processing the raw

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activity data among multiple components, it is able to process more information more quickly than do previous designs, in which "all the [raw] network information flows to one location." *Id.* at col. 4 ll. 9-13. In contrast to these previous designs, the distributed architecture reduces the storage and computational resource requirements of the central repository, which need no longer "keep up with the massive record flows from the network devices" or maintain "huge databases." *Id.* at col. 4 ll. 7-13. Moreover, the distributed architecture reduces network traffic overhead "by reducing the volume of data sent on the network to the CEM." *Id.* at col. 6 ll. 49-50. The end result is a system that can monitor, process, and create database records reflecting network activity at large scale.

Network operators can use the ultimate records to get an accurate and dependable picture of network usage. The operators can use this information for any number of purposes, such as setting the right price for network services, implementing usage-based charging models, deploying new services based on usage trends, planning network resource provisioning, and usage auditing. *Id.* at col. 2 l. 65-col. 3 l. 27.

Legal Framework

The Supreme Court has outlined a two-step framework for analyzing whether a claim is eligible. *See Alice*, 134 S. Ct. at 2355. First, we determine whether the claim at issue is directed to a judicial exception, such as an abstract idea. *Id.* If so, we next consider all the claim elements in combination to determine whether they recite

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an inventive concept sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself. *Id.* As this Court recently explained, this two-step formulation contemplates that step one is meaningful, and that a substantial class of claims are not directed to patent ineligible concepts. *Enfish*, 822 F.3d at 1335; *see also McRO*, 2016 U.S. App. LEXIS 16703, 2016 WL 4896481 at *7-10.

The *Alice* framework leaves open at least three questions: (1) what makes an idea "abstract"; (2) what it means for a claim to be "directed to" an abstract idea; and (3) what limitations provide an "inventive concept?" To answer these questions we first look to the foundational principles of the abstract idea exception.

For well over a century, the Supreme Court has repeatedly and consistently used the abstract idea exception to prevent patenting a result where "it matters not by what process or machinery the result is accomplished." *O'Reilly v. Morse*, 56 U.S. 62, 113, 14 L. Ed. 601 (1854). The Court has explained that a patent may issue "for the means or method of producing a certain result, or effect, and not for the result or effect produced." *Diamond v. Diehr*, 450 U.S. 175, 182 n.7, 101 S. Ct. 1048, 67 L. Ed. 2d 155 (1981). "A patent is not good for an effect, or the result of a certain process" because such patents "would prohibit all other persons from making the same thing by any means whatsoever." *Le Roy v. Tatham*, 55 U.S. 156, 175, 14 L. Ed. 367 (1853).

Hence, the abstract idea exception must be applied in a way that reserves patent protection for means rather than

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for ends and thus maintains the incentive of "some future inventor, in the onward march of science" to discover new ways of achieving the same result more cheaply and efficiently than has the patentee. *Morse*, 56 U.S. at 113; *see also Dolbear v. Am. Bell Tel. Co.*, 126 U.S. 1, 533, 8 S. Ct. 778, 31 L. Ed. 863, 1888 Dec. Comm'r Pat. 321 (1888) ("Other inventors may compete with him for the ways of giving effect to the discovery."). This basis of the abstract idea exception runs clear through the Supreme Court's jurisprudence from the nineteenth century to the present day.

Based on the Supreme Court's use of the abstract idea exception, it is apparent that a desired goal (i.e., a "result or effect"), absent structural or procedural means for achieving that goal, is an abstract idea. Not every abstract idea is naturally phrased as a goal, and indeed, the Supreme Court has treated somewhat disparate ideas, such a "mathematical formula," *Gottschalk v. Benson*, 409 U.S. 63, 71, 93 S. Ct. 253, 34 L. Ed. 2d 273 (1972) , and a "fundamental economic practice," *Bilski v. Kappos*, 561 U.S. 593, 611, 130 S. Ct. 3218, 177 L. Ed. 2d 792 (2010), under the abstract idea rubric. Nevertheless, long-standing Supreme Court precedent clearly establishes that a desired goal without means for achieving that goal is an abstract idea. With this in mind, I turn back to the first step of the eligibility inquiry.

Step one of the eligibility inquiry asks whether the claim is "directed to" a judicial exception, such as an abstract idea. The answer is not automatically "yes" simply because a claim involves an abstract idea, and it

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is not automatically "no" simply because a claim recites limitations beyond the abstract idea. *See McRO*, 2016 U.S. App. LEXIS 16703, 2016 WL 4896481 at *7. The Supreme Court has recognized that "[a]t some level, all inventions embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Alice*, 134 S. Ct. at 2354 (internal quotation marks and ellipses omitted). Unless step one is a nullity, the phrase "directed to" must therefore mean more than merely "embody, use, reflect, rest upon, or apply." At the same time, the phrase "directed to" must apply even where the claim does not wholly pre-empt the abstract idea. For example, it is well settled that the prohibition against patenting abstract ideas cannot be circumvented by limiting the use of the idea to a particular technological environment or adding insignificant extra-solution activity. *Bilski*, 561 U.S. at 610-11. Consequently, the step one inquiry cannot be settled in the affirmative by the observation of an underlying abstract idea nor in the negative by recitation of just any additional limitations.

Rather, the step one inquiry is a legal analysis that must focus on determining "what type of discovery is sought to be patented." *Parker v. Flook*, 437 U.S. 584, 593, 98 S. Ct. 2522, 57 L. Ed. 2d 451 (1978). For example, a claim is "directed to" an abstract goal if the claim fails to describe *how*—whether by particular process or structure—the goal is accomplished.[2] Even if the claim

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2. The same concern applies regardless of how narrow the goal. *See Mayo*, 132 S. Ct. at 1302 (holding that even "narrow laws that may have limited applications" "nonetheless implicate this concern" of pre-emption); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1353

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recites additional limitations, the claim is nevertheless directed to the underlying goal if those limitations fail to restrict how the goal is accomplished. Conversely, where the claim recites specific structure or function for accomplishing the desired goal in a particular way, the claim is more likely directed to a means than to the underlying abstract goal.[3] *See McRO*, 2016 U.S. App. LEXIS 16703, 2016 WL 4896481, at *8. In those cases, concerns of patent eligibility are resolved at step one, and there is no need to proceed to step two. *See Enfish*, 822 F.3d at 1339.

Post-*Alice*, we have only twice held that a patent was eligible under § 101 based on a determination during step one that the claims were not directed to an abstract idea. In *Enfish*, we held that the claims at issue were directed to "a specific implementation of a solution to a problem in the software arts" designed to "improve the way a computer stores and retrieves data in memory," as opposed to an abstract idea implemented with general-purpose computer components. *Id.* In *McRO*, we held that the claims at issue were eligible under *Alice* step one because they were directed to "a specific asserted improvement in computer

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(Fed. Cir. 2014) ("exclusion applies if a claim involves a natural law or phenomenon or abstract idea, even if the particular natural law or phenomenon or abstract idea at issue is narrow").

3. The terms "means" and "function," as used here, are not to be strictly understood in the context of "means plus function" claiming under 35 U.S.C. § 112(f). When considering whether a claim is directed to an abstract idea or is limited to a means of achieving an underlying abstract goal, we necessarily take into consideration whether the claim includes means-plus-function limitations.

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animation, i.e., the automatic use of rules of a particular type." *McRO*, 2016 U.S. App. LEXIS 16703, 2016 WL 4896481 at *8. The scarcity of cases resolved under step one should not be interpreted as an indication that step one creates a particularly high bar.

The inquiry moves to the careful limitation-by-limitation analysis of step two, where there is a credible concern that the additional limitations fail to direct the claim to an eligible invention—e.g., a particular means for accomplishing an underlying goal—or to otherwise obviate concerns of pre-emption. The purpose of the step-two analysis is to ensure that the claim recites an "inventive concept," which the Supreme Court has defined as "an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself." *Alice*, 134 S. Ct. at 2355.

To be clear, the concept of inventiveness is distinct from that of novelty. Novelty is the question of whether the claimed invention is new. Inventiveness is the question of whether the claimed matter is invention at all, new or otherwise. The inventiveness inquiry of § 101 should therefore not be confused with the separate novelty inquiry of § 102 or the obviousness inquiry of § 103. Accordingly, the Supreme Court has cautioned that "[t]he obligation to determine what type of discovery is sought to be patented must precede the determination of whether that discovery is, in fact, new or obvious." *Flook*, 437 U.S. at 593.

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Claims that fail to recite how a desired goal is accomplished do not recite an inventive concept. For example, limitations on the context—as opposed to the manner—of accomplishing a desired result is typically not inventive, even if that context is novel. The Pythagorean Theorem cannot be made eligible by confining its use to existing surveying techniques, *Flook*, 437 U.S. at 590, nor can the business practice of hedging risk be patented by confining its use to the commodities and energy markets, *Bilski*, 561 U.S. at 612, nor the goal of "gathering and combining data" by confining its use to particular types of photographic information, *Digitech Image Technologies, LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014). Even though such field-of-use limitations prevent a claim from wholly pre-empting an abstract idea, they are not *inventive* because they describe only the context rather than the manner of achieving a result. For similar reasons, limitations that recite only insignificant extra-solution activity also cannot supply an inventive concept because extra-solution activity, by definition, describes activity unrelated to how the solution is achieved. *See Flook*, 437 U.S. at 590; *see also Mayo*, 132 S. Ct. at 1300. It is therefore well established that "limiting an abstract idea to one field of use or adding token postsolution components [does] not make the concept patentable." *Bilski*, 561 U.S. at 612.

Illusory limitations, which describe only procedure or structure common to every means of accomplishing a given result, also cannot provide an inventive concept. Put another way, limitations that simply "comprise the abstract concept" are not inventive. *See Ultramercial*

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Inc. v. Hulu, LLC, 772 F.3d 709, 715 (Fed. Cir. 2014). For example, a claim cannot become eligible by reciting that physical automation is accomplished by a "machine" or that logical automation is accomplished by a "computer," *see OIP Technologies, Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015), because physical automation requires a machine and logical automation requires a computer. Because such elements cannot restrict a claim to a particular *way* of automating, recitation of a machine or computer "to lend speed or efficiency to the performance of an otherwise abstract concept does not meaningfully limit claim scope for purposes of patent eligibility." *CLS Bank Int'l v. Alice Corp.*, 717 F.3d 1269, 1286 (Fed. Cir. 2013).

Post-*Alice*, we have only once found that a claim's additional limitations provide an inventive concept. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).[4] In *DDR*, we held that "a specific *way* to automate the creation of a composite web page" was patent eligible even though the underlying abstract idea of "increasing sales by making two web pages look the same" was not. *DDR*, 773 F.3d at 1259 (emphasis added). In doing so, we distinguished our precedent on the basis that the *DDR* claims "do not broadly and generically claim 'use of the Internet'" to achieve the desired result,

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4. In one recent case, we found that a patentee made allegations of an inventive step that, when unrebutted, were sufficient to survive a motion to dismiss for ineligibility under Fed. R. Civ. P. 12(b)(6). *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1352 (Fed. Cir. 2016). Of course, the alleged infringer may yet prevail in invalidating the patent under section 101.

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but instead "specify how interactions with the Internet are manipulated to yield a desired result." *Id.* at 1258. We cautioned that "not all claims purporting to address [technological] challenges are eligible for patent." *Id.* Instead, only claims specifying *how* to overcome those technological challenges are eligible.

In summary, the eligibility inquiry requires us to first determine whether the claim is "directed to" an abstract idea (such as a result) rather than to an application (such as a particular means of accomplishing that result). If the claim is clearly directed to an application, the inquiry may end. If doubt remains, the inquiry moves to step two, where we carefully consider all the implementation details to determine whether they define an inventive concept. The case law has identified several types of limitations that frequently fail to provide an inventive concept, including illusory limitations (e.g., generic computer implementation) and contextual limitations (e.g., field of use, extra-solution activity). The step-two inquiry is a flexible and fact-specific one focused on whether the claims unduly foreclose future innovation.

DISCUSSION

If I were to examine only the written description of the asserted patents, I would conclude that the network monitoring system disclosed therein is eligible for patenting. The specifications disclose a distributed system architecture comprising special-purpose components configured to cooperate with one another according to defined protocols in a user-configurable manner for the

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purpose of deriving useful accounting records in a more scalable and efficient manner than previously possible. The disclosed system improves upon prior art systems by creating a specific "distributed filtering and aggregation system . . . [that] eliminates capacity bottlenecks" through distributed processing. '984 patent at col. 6 ll. 45-50. The disclosed system is patent eligible.

But the inquiry is not whether the *specifications* disclose a patent-eligible system, but whether the *claims* are directed to a patent ineligible concept. *See Synopsys*, 2016 U.S. App. LEXIS 18561, 2016 WL 6068920, at *8) ("The § 101 inquiry must focus on the language of the Asserted Claims themselves. . . . complex details from the specification cannot save a claim directed to an abstract idea that recites generic computer parts.") (citing *Accenture*, 728 F.3d at 1345); *Alice*, 134 S. Ct. at 2355 ("First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts."); *Diamond v. Diehr*, 450 U.S. 175, 189, 101 S. Ct. 1048, 67 L. Ed. 2d 155 (1981) ("In determining the eligibility of respondents' claimed process . . . , their claims must be considered as a whole."); *McRO*, 2016 U.S. App. LEXIS 16703, 2016 WL 4896481 ("If the claims are "directed to" an abstract idea, then the inquiry proceeds to the second step . . . . In step two we consider whether the claims contain an 'inventive concept' . . . . To do so we look to both the claim as a whole and the individual claim elements. . . ."); *see also McCarty v. Lehigh Valley R.R. Co.*, 160 U.S. 110, 116, 16 S. Ct. 240, 40 L. Ed. 358, 1895 Dec. Comm'r Pat. 721 (1895) ("if we once begin to include elements not mentioned in the claim, in order to limit such claim . . . , we should never know where to stop").

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Answering this inquiry requires a court to step through each claim to determine whether it is directed to an abstract idea, and if so, to determine whether the claim recites structural or procedural limitations sufficient to ensure that the claim "amounts to significantly more than a patent upon the ineligible concept itself." *Alice*, 134 S. Ct. at 2355.

A. '065 Patent

Amdocs asserted claims 1, 4, 7, 13, and 17 of the '065 patent. Claim 1 is representative:

> 1. A computer program product embodied on a computer readable storage medium for processing network accounting information comprising:
>
> computer code for receiving from a first source a first network accounting record;
>
> computer code for correlating the first network accounting record with accounting information available from a second source; and
>
> computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.

The underlying goal of claim 1 is to combine particular information from two different sources. But the step one

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question is not whether claim 1 involves that abstract idea, but whether claim 1 is directed to it.

Claim 1 recites a software product embodied on a storage medium, but it provides no structural limitations of either the physical medium or the digital software. All software products are stored on a physical storage medium, and claim 1 recites no limitations concerning that physical structure. Likewise, claim 1 discusses only very broad, high-level functionality rather than details about how exactly that functionality is implemented, providing no information about the structure of the software. That the recited information concerns network accounting also provides no particular structure. Claim 1 is therefore not directed to any specific structure, whether physical or digital.

Rather than reciting structure, claim 1 defines the program product using only functional limitations. Looking at those limitations, I find no specific process for accomplishing the abstract goal of combining data from two sources. The recited software performs three steps: (1) receiving information from a first source, (2) correlating the information with information available from a second source, and (3) using that available information to "enhance" the first information. Under the district court's construction, to "enhance" includes simply retrieving and recording information in a field. The three steps therefore only "comprise the abstract concept" of combining data from different sources. *Ultramercial*, 772 F.3d at 715. Claim 1 is therefore directed to an abstract idea. Accordingly, the inquiry continues under step two.

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Turning to step two, I see no limitations confining the claim to a particular means of combining information from different sources. Limiting the abstract idea to the context in which the information relates to network accounting records is a field-of-use limitation that does not supply an inventive concept. *See Flook*, 437 U.S. at 590. The use of "computer code" to automate logic is likewise not an inventive concept because "recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible." *DDR Holdings*, 773 F.3d at 1256. The abstract idea of "gathering and combining data" with a computer is ineligible when only limited by the type of data. *See Digitech*, 758 F.3d at 1351. The concept of gathering and combining data is all that claim 1 recites.

Amdocs argues that the "enhance" step provides an inventive concept because the district court's construction of the term "enhance" requires applying zero or more functions "in a distributed fashion." Br. of Appellant at 59. Amdocs thus renews its argument from the trial proceedings that "the asserted claims are patentable, in part, due to the *manner in which* the claims facilitate the generation of network accounting records—i.e., 'in a distributed fashion.'" J.A. 1567 (emphasis original).

But the "distributed fashion" limitation cannot provide an inventive concept because it has no meaning in the context of claim 1. Claim 1 only requires adding a single piece of information to an accounting record, and it is unclear what doing this "in a distributed fashion" could mean. Moreover, claim 1 recites no components or structure over which the work might be "distributed."

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I agree with the district court that claim 1 is ineligible because it fails to recite any structure or process limiting the claim to a particular means of combining accounting data from different sources. For that reason, I would *affirm* the district court's determination that claims 1, 4, 7, 13, and 17 of the '065 patent are ineligible.

B. '510 Patent

Amdocs asserted claims 16, 17, and 19 of the '510 patent. Claim 16 is representative:

> 16. A computer program product stored in a computer readable medium for reporting on a collection of network usage information from a plurality of network devices, comprising:
>
> computer code for collecting network communications usage information in real-time from a plurality of network devices at a plurality of layers;
>
> computer code for filtering and aggregating the network communications usage information;
>
> computer code for completing a plurality of data records from the filtered and aggregated network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;
>
> computer code for storing the plurality of data records in a database;

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computer code for submitting queries to the database utilizing predetermined reports for retrieving information on the collection of the network usage information from the network devices; and

computer code for outputting a report based on the queries;

wherein resource consumption queries are submitted to the database utilizing the reports for retrieving information on resource consumption in a network; and

wherein a resource consumption report is outputted based on the resource consumption queries.

In step one, the district court identified the abstract idea underlying claim 16 as "using a database to compile and report on network usage information." J.A. 22. I agree that this is the goal of the claimed invention. Indeed, the claim's preamble recites that the invention is for "reporting on a collection of network usage information." But again, the step 1 question is not whether claim 16 has a goal, but whether claim 16 is directed to that goal rather than to a means of achieving that goal.

As discussed above, one way for a claim to be directed to a means rather than to an abstract end is to recite process limitations defining a specific way of arriving at that end. *See Diehr*, 450 U.S. at 182-83 (holding that "a process may be patentable, irrespective of the particular

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form of the instrumentalities used"). Such limitations may obviate concerns of pre-emption because they leave room for future inventors to develop new paths to the same end without infringing the patent. *See Morse*, 56 U.S. at 113. Because § 101 is a "coarse eligibility filter," *Research Corp. Technologies v. Microsoft Corp.*, 627 F.3d 859, 869 (Fed. Cir. 2010), the recited way of accomplishing the goal need not be extensively detailed or even complete. Rather, it must meaningfully limit the claim to a manner of achieving the desired result without unduly foreclosing future innovation.

Amdocs argues that claim 16 is eligible because it recites procedural limitations, including "filtering and aggregating" "in real time . . . at a plurality of layers," and using the filtered and aggregated information to "complete" data records "in a distributed fashion." Br. of Appellant at 52-53. It therefore argues that the claims "prescribe a particular inventive *manner* by which network accounting information is collected, processed, and transformed into meaningful records." *Id.* at 53-54 (emphasis original). I agree.

The disclosed invention improves upon the manner in which prior art systems collected and processed network usage information. Unlike those prior art systems, which used centralized processing, the invention improves performance by distributing the processing work among cooperating components. But the invention cannot be merely the idea of distributing the processing—it must describe how. The idea of improving performance through distributed processing is just an abstract goal because the

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benefits of distributed processing can be attained only through a specific distributed architecture and protocol. The issue here is whether the claims recite enough of that distributed architecture or protocol.

Claim 16 captures enough of the distributed protocol disclosed in the specification to pass through the coarse eligibility filter of § 101. First, claim 16 recites that the network information is collected from a specific source—"a plurality of network devices at a plurality of layers." Next, claim 16 recites that the distributed system operates on the collected information by applying two specific types of functions—filtering and aggregating. Then, claim 16 recites that the filtered and aggregated information is further processed by enhancing it "in a distributed fashion." *See Amdocs*, 761 F.3d at 1338 (upholding the district court's construction of "completing" as requiring distributed enhancement). Unlike claim 1 of the '065 patent, claim 16 of the '510 patent recites "a plurality of network devices" over which the enhancement work may be distributed. Taken together, the limitations of claim 16 capture at least some of the *process* by which the disclosed system collects, processes, and transforms network accounting information, in a distributed fashion, into usable accounting records.

The district court held that claim 16 "does not add any specific implementation beyond the abstract idea that information is collected and stored, and reports are generated," because "[c]ollecting, filtering, aggregating, and completing network information amounts to 'electronic recordkeeping.'" J.A. 22. I agree that claim 16 embodies a method of electronic record keeping, but I

disagree that the claim is directed to that abstract goal rather than to a particular process for achieving it. Simply because computers are frequently called upon to perform operations such as "[c]ollecting, filtering, aggregating, and completing," this does not mean that any claim reciting these steps in any order and for any purpose is necessarily directed to that abstract concept. We must consider the claim as a whole and ask "what *type* of discovery is sought to be patented?" *Flook*, 437 U.S. at 593 (emphasis added). Here, the type of invention is a distributed software system that collects and processes network activity in a particularly scalable manner.

Openet argues that the "distributed fashion limitation should be given no weight because a "distributed architecture" is "a *generic* type of architecture." Br. of Appellee at 43. However, the claimed invention is not that the work is distributed, but *how* that distributed architecture is applied. Even if distributed processing generally was a known approach for improving system performance, claim 16 recites a *way* of applying distributed processing to the problem of activity monitoring, by collecting activity data "in real time from a plurality of network devices at a plurality of layers," then filtering and aggregating the data, and then using the filtered and aggregated data to assemble accounting records using a distributed "enhancement" protocol. To whatever extent this claimed approach was old, obvious, too broadly claimed, or unsupported, these considerations are apart from the eligibility inquiry and best reserved for other parts of the patentability analysis.

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Like the claims at issue in *Enfish* and *McRO*, independent claim 16 and its dependent claims 17 and 19 of the '510 patent are "directed to" a particular process that improves upon the manner in which systems collect and process network usage information, and the claimed process is limited in a specific way. As such, the claims are patent-eligible under step one of the *Alice* test, and there is no need to consider step two. *Id.* For that reason, I would *reverse* the district court's holding to the contrary.

C. '984 Patent

Amdocs alleged infringement of claims 1, 2, 7, 8, and 13 of the '984 patent. Claims 1 and 13 are independent, and claim 1 is representative:

1. A method for reporting on the collection of network usage information from a plurality of network devices, comprising:

(a) collecting network communications usage information in real-time from a plurality of network devices at a plurality of layers utilizing multiple gatherers each including a plurality of information source modules each interfacing with one of the network devices and capable of communicating using a protocol specific to the network device coupled thereto, the network devices selected from the group consisting of routers, switches, firewalls, authentication servers, web hosts, proxy servers, netflow servers, databases, mail servers, RADIUS

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servers, and domain name servers, the gatherers being positioned on a segment of the network on which the network devices coupled thereto are positioned for minimizing an impact of the gatherers on the network;

(b) filtering and aggregating the network communications usage information;

(c) completing a plurality of data records from the filtered and aggregated network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;

(d) storing the plurality of data records in a database;

(e) allowing the selection of one of a plurality of reports for reporting purposes;

(f) submitting queries to the database utilizing the selected reports for retrieving information on the collection of the network usage information from the network devices; and

(g) outputting a report based on the queries.

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Claim 1 of the '984 patent is analogous to claim 16 of the '510 patent, except that it adds limitation (a), which recites details of the distributed architecture.

In step one, the district court identified the abstract idea underlying claim 1 as "reporting on the collection of network usage information from a plurality of network devices." J.A. 27. In step two, the district court found no inventive concept because the additional limitations recite only that "the genetic computer collects information from conventional devices to create records," using "gatherers, which are software," and then "filtering, completing, storing, allowing, submitting, and outputting," all of which are actions that are "conventional for both generic computers and generic databases." J.A. 27. It applied the same reasoning to claim 13. *Id.*

I see no error in the district court's articulation of the underlying abstract idea, which duplicates the preamble of claim 1. But again, after identifying the underlying idea, a court must still ask whether the claim is *directed to* that idea or to a specific means.

Because claim 1 of the '984 patent includes the same process limitations as the '510 claims, it is eligible for at least the same reasons. It was error for the district court to dismiss these process limitations solely on the basis that "filtering, completing, storing, allowing, submitting, and outputting" are "conventional" types of activities for computers. *Id.* If this analysis were sufficient, no software invention could be eligible because every software invention comprises at most the "conventional" activities

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of receiving, storing, manipulating, and outputting information. These activities are *all* that computers can do. But "a new combination of steps in a process may be patentable even though all the constituents of the combination were well known and in common use before the combination was made." *Diamond v. Diehr*, 450 U.S. at 188. Whether a process is performed by software, hardware, machine, or man, the eligibility requirements are identical. The claimed invention must be limited to a specific *means* (i.e., process or structure) for achieving its underlying purpose. In other words, the claim must be limited "by what process or machinery the result is accomplished." *Morse*, 56 U.S. at 113.

It is worth noting that the "process or machinery" by which a result is accomplished need not be tangible to be patent eligible. Though the Supreme Court's early Information Age jurisprudence incorporated the Industrial Age requirement that eligible inventions must use or manipulate tangible materials,[5] the Court's subsequent case law has questioned that requirement. *See Bilski*, 561 U.S. at 605 ("But there are reasons to doubt whether the [machine-or-transformation] test should be the sole criterion for determining the patentability of inventions in the Information Age."). A software program

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5. *See, e.g., Diehr*, 450 U.S. at 183 ("A process is a mode of treatment of certain materials") (quoting *Cochrane v. Deener*, 94 U.S. 780, 787-788, 24 L. Ed. 139, 1877 Dec. Comm'r Pat. 242 (1877)); *Gottschalk v. Benson*, 409 U.S. 63, 70, 93 S. Ct. 253, 34 L. Ed. 2d 273 (1972) ("Transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines.").

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is a digital machine. Like a physical machine, a digital machine is made of specific parts that interact with one another to achieve a specific result in a specific way. A claim to either type of machine is eligible only if the claim recites structural limitations detailing those specific parts, process limitations detailing that specific way, or a combination of the two. Such structure or process may be found in the recited components individually as well as in their arrangement and interaction with one another as a system. But the district court considered neither possibility.

Claim 1 recites a distributed architecture, including three types of components (i.e., network devices, gatherers, and ISMs) with given interrelations. The gatherers are coupled to the network devices and positioned on the same segment of the network as those devices. Moreover, each gatherer includes multiple ISMs in a one-to-many relationship, and the ISMs interface with respective network devices using a protocol specific to that device. Because such software structure and process can confer eligibility, the district court erred by dismissing the recited components on the sole basis that they "are software" without considering whether these architectural aspects are inventive structure or process. J.A. 27.

For the forgoing reasons, I would find that claim 1 of the '984 patent and its dependent claims 2, 7, and 8 are patent eligible. Independent claim 13 is also eligible because, as the district court acknowledged, it "is directed to essentially the same invention." J.A. 27. I would therefore *reverse* the district court's holding that claims 1, 2, 7, 8, and 13 of the '984 patent are not patent eligible.

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D. '797 Patent

Amdocs alleged infringement of claims 1, 2, 7, 8, and 19 of the '797 patent. Claims 1, 7, and 19 are independent, and claim 1 is representative:

1. A method for generating a single record reflecting multiple services for accounting purposes, comprising:

(a) identifying a plurality of services carried out over a network;

(b) collecting data describing the plurality of services; and

(c) generating a single record including the collected data, wherein the single record represents each of the plurality of services;

wherein the services include at least two services selected from a group consisting of a hypertext transfer protocol (HTTP) session, an electronic mail session, a multimedia streaming session, a voice over Internet Protocol (IP) session, a data communication session, an instant messaging session, a peer-to-peer network application session, a file transfer protocol (FTP) session, and a telnet session;

wherein the data is collected utilizing an enhancement procedure defined utilizing a graphic user interface by:

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> listing a plurality of available functions
> to be applied in real-time prior to end-
> user reporting,
>
> allowing a user to choose at least one
> of a plurality of fields, and
>
> allowing the user to choose at least one
> of the listed functions to be applied to
> the chosen field in real-time prior to
> the end-user reporting.

In step one, the district court identified the underlying abstract idea as "generat[ing] a single record reflecting multiple services." J.A. 24. In step two, the district court found that the claim adds "only conventional computer functions operating in a conventional manner," and therefore "amounts to electronic record keeping," which is "one of the most basic functions of a computer." *Id.* The court found nothing inventive about the "enhancement procedure" or about defining that procedure using a graphical user interface ("GUI"), which it reasoned is a conventional way to interact with a computer. *Id.*

I see no error with the district court's articulation of the underlying abstract idea, which tracks the preamble of claim 1. I also agree that claim 1 is directed to an abstract idea rather than to a particular process or structure. Steps (a)—(c) utilize nebulous terms to describe a process of "identifying" "services," collecting data "describing" those services, and generating a "record" that "represents" the services. These three steps merely

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comprise the abstract concept of collecting information about network services, but the goal of "gathering and combining data" is not patent-eligible. *See Digitech*, 758 F.3d at 1351.

The next question is whether the two wherein clauses redirect the claim to a particular method or structure. They do not. The first wherein clause limits the subject of the collected data, but it does not define any particular process or structure. The second wherein clause recites that the data is collected utilizing a distributed enhancement procedure and that the procedure is customized by a user's selection of the fields and functions to apply. Like the '065 claims, claim 1 of the '797 recites no distributed architecture over which the enhancement might be performed. Moreover, the user's pre-solution configuration does not clearly redirect the claim to a particular method of gathering data—at least there is a credible concern that it does not.

Moving to step two, the central question is whether the second wherein clause contains some inventive concept such that claim 1 "amounts to significantly more than a patent upon the" idea of collecting information about network services. Amdocs argues that the "enhancement procedure" provides this inventive concept because it requires combining data from multiple network devices. Br. of Appellant at 63-65. But this argument is not persuasive because the abstract idea of "gathering and combining data" is not patent-eligible, *see Digitech*, 758 F.3d at 1351, regardless of the number of sources from which the data is gathered. Lastly, Amdocs argues that the claims "do not

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recite the general use of a GUI, but also specifically limit **how** the GUI is used." Br. of Appellant at 65 (emphasis original). I do not agree. The limitations of the second wherein clause do not limit *how* the GUI is used, but for what *purpose*. That purpose is to allow the user to choose the enhancement functions. Nothing in these limitations evinces an inventive way of permitting the user to select the functions or otherwise customize the enhancement. At best, the user's pre-solution customization amounts to insignificant pre-solution activity. *See Bilski*, 561 U.S. at 612. I see no inventive concept in claim 1.

For the foregoing reasons, I would hold that claim 1 of the '797 patent is ineligible. Claims 2, 7, 8, or 19 are likewise ineligible because Amdocs has not argued that any of these claims add anything more to claim 1. Accordingly, I would *affirm* the district court's determination that claims 1, 2, 7, 8, and 19 of the '797 patent are ineligible.

For these reasons, I *dissent*.

APPENDIX B — OPINION AND ORDER OF THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA, ALEXANDRIA DIVISION, FILED OCTOBER 24, 2014

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division

1:10cv910 (LMB/TRJ)

AMDOCS (ISRAEL) LIMITED,
AN ISRAELI CORPORATION,

Plaintiff,

v.

OPENET TELECOM, INC.,
A DELAWARE CORPORATION, *et al.*,

Defendants.

October 24, 2014, Decided
October 24, 2014, Filed

MEMORANDUM OPINION

Before the Court is Defendants' Motion for Judgment on the Pleadings [Dkt. No. 293]. Having considered the pleadings as well as the oral argument of counsel, the motion will be granted for the reasons discussed below.

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I. BACKGROUND

Amdocs (Israel) Limited ("plaintiff" or "Amdocs") and Openet Telecom LTD and Openet Telecom, Inc. (collectively, "Openet") compete to provide software which allows telecommunications providers to track customer usage of computer network services. On August 16, 2010 Amdocs filed this patent infringement action alleging that Openet infringed U.S. Patent Nos. 6,836,797 ("the "191 Patent") and 7,631,065 ("the '065 Patent."). Complaint [Dkt. No. 1]. Amdocs added U.S. Patent Nos. 7,412,510 ("the '510 Patent") and 6,947,984 ("the '984 Patent") via an Amended Complaint on February 3, 2011. [Dkt. No. 50]. Openet responded with an Answer and Counterclaim, alleging invalidity and non-infringement and filed a Motion for Summary Judgment of Non-Infringement and Invalidity on May 26, 2011. The motion was granted as to non-infringement by a memorandum opinion on January 22, 2013. [Dkt. No. 259]. Amdocs appealed. [Dkt. No. 264]. The Federal Circuit affirmed two term constructions but reversed a third, and accordingly vacated the grant of summary judgment of non-infringement. *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 761 F.3d 1329 (Fed. Cir. 2014). While the case was on appeal, the Supreme Court decided *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, which invalidated a computer software patent under 35 U.S.C. § 101 for being directed to an abstract idea. 134 S.Ct. 2347, 189 L. Ed. 2d 296 (2014).

Upon remand, Openet filed the pending Motion for Judgment on the Pleadings, in which it argues that all of the asserted claims are invalid under 35 U.S.C.

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§ 101 as being directed to unpatentable abstract ideas. Defendants' Memorandum In Support Of Their Motion For Judgment On The Pleadings [Dkt. No. 294] ("Openet's Br."). Amdocs has filed an opposition, Plaintiff's Opposition To Defendants' Motion For Judgment On The Pleadings [Dkt. No. 297] ("Opp'n"), and Openet has replied. Openet's Reply In Support Of Their Motion For Judgment On The Pleadings [Dkt. No. 298] ("Reply").

II. DISCUSSION

A. Standard of Review

"Section 101 patent eligibility is a question of law." *In re Roslin Institute (Edinburgh)*, 750 F.3d 1333, 1335 (Fed. Cir. 2014). Accordingly, a court may invalidate patent claims directed to non-eligible subject matter on the pleadings. *See buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350 (Fed. Cir. 2014).

In a motion for judgment on the pleadings, the court should "assume all facts alleged in the complaint are true and draw all reasonable factual influences in [the plaintiff]'s favor." *Burbach Broadcasting Co. of Del, v. Elkins Radio Corp*, 278 F.3d 401, 406 (4th Cir. 2002). "Judgment should be entered when the pleadings, construing the facts in the light most favorable to the non-moving party, fail to state any cognizable claim for relief, and the matter can, therefore, be decided as a matter of law." *O'Ryan v. Dehler Mfg. Co.*, 99 F. Supp. 2d 714, 718 (E.D. Va. 2000).

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B. Patentability after Alice

To be eligible for a patent, a claimed invention must be directed to "any new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101 (2012). "In choosing such expansive terms . . . modified by the comprehensive 'any,' Congress plainly contemplated that the patent laws would be given wide scope," *Diamond v. Chakrabarty*, 447 U.S. 303, 308, 100 S. Ct. 2204, 65 L. Ed. 2d 144 (1980); however, "for more than 150 years" the Supreme Court has "held that [§ 101] contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, 134 S.Ct. 2347, 2354, 189 L. Ed. 2d 296 (2014) (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S.Ct. 2107, 2116, 186 L. Ed. 2d 124 (2013)). Accordingly, "a new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. Likewise, Einstein could not patent his celebrated law that $E=mc^2$; nor could Newton have patented the law of gravity." *Chakrabarty*, 447 U.S. at 309.

Although those examples match the Supreme Court's old description of the exceptions as "a fundamental truth; an original cause; [or] a motive," *LeRoy v. Tatham*, 55 U.S. 156, 175, 14 L. Ed. 367 (1852), claims which are not so purely abstract have also been invalidated under § 101. For example, in *Bilski v. Kappos* the Court found a claim directed to "the basic concept of hedging, or protecting against risk" to be unpatentable. 561 U.S. 593, 130 S. Ct. 3218, 3231, 177 L. Ed. 2d 792 (2010). In *Bilski*, the

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Court looked past the text of the claims to the underlying concept, and viewing the claimed invention as manifesting no more than an abstract idea declared the claims patent ineligible. *Id.* This conforms with the Supreme Court's warning "against interpreting patent statutes in ways that make patent eligibility depend simply on the draftsman's art." *Mayo Collab. Servs. v. Prometheus Labs. Inc.*, 132 S.Ct. 1289, 1294, 182 L. Ed. 2d 321 (2012) (internal quotation marks omitted).

Decided on June 19, 2014,[1] *Alice* articulated a two-step process for determining whether a claim was directed to patent-eligible subject matter. 134 S.Ct. at 2355. "First, [a court must] determine whether the claims at issue are directed to [a] patent-ineligible concept[]." *Id.* "If so, [the court must] then ask, 'what else is there in the claims before us?'" *Id.* (internal quotation marks omitted). "To answer that question, [the court must] consider the elements of each claim ... to determine whether the additional elements transform the nature of the claim into a patent-eligible application." *Id.* (internal quotation marks omitted).

At step one, a court must evaluate the claims "[o]n their face" to determine to which "concept" the claims are "drawn." *Id.* at 2356 ("On their face, the claims before us are drawn to the concept of intermediated settlement."); *Bilski*, 130 S.Ct. at 3229 (finding claims drawn to "both the concept of hedging risk and the application of that concept to energy markets" to be patent ineligible).

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1. After the grant of summary judgment, and while this case was on appeal to the Federal Circuit.

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At step two, a court "search[es] for an inventive concept - i.e., an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." *Alice*, 134 S.Ct. at 2355 (internal quotation marks omitted). In *Alice*, the Court concluded that the claimed invention was directed to an abstract idea implemented on a generic computer, and that computer implementation was not "sufficient to transform the claimed abstract idea into a patent-eligible application." *Id.* at 2357 (internal quotation marks omitted). For an abstract idea involving a computer to be patent-eligible, "the claim ha[s] to supply a 'new and useful' application of the idea." *Id.* (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67, 93 S. Ct. 253, 34 L. Ed. 2d 273 (1972)). Accordingly, "the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent eligible invention." *Id.* at 2358. At step two, the Supreme Court looked at the invention as described by the claims, rather than the further detail given in the specification. *See id.* at 2359.

This framework requires considering what constitutes an abstract idea and what can raise an abstract idea to the level of a patent-eligible application. The Supreme Court explicitly refused to "delimit the precise contours of the 'abstract ideas' category." *Id.* at 2357. Although the Court was clear that "appending conventional steps, specified at a high level of generality" or reciting the use of a generic computer was not sufficient to make an idea patent eligible, *id.*, neither did the Court elucidate any necessary elements for eligibility. *See id.* at 2358. The Court described *Diamond v. Diehr*, 450 U.S. 175, 101 S. Ct. 1048, 67 L.

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Ed. 2d 155 (1981) as succeeding at step two because the claim "improved an existing technological process," *id.*, and implied that if the claims "improve[d] the function of the computer itself" then they would be patentable. *Id.* at 2359. Indeed, one district judge observed that since *Alice*, the "two step test" is more like Justice Stewart's statement about obscenity: "I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description, and perhaps I could never succeed in intelligibly doing so. But I know it when I see it." *McRO, Inc. v. Activision Pub., Inc.*, No. CV 14-336-GW, 2014 U.S. Dist. LEXIS 135152, 2014 WL 4759953, at *5 (CD. Cal. Sept. 22, 2104) (quoting *Jacobellis v. State of Ohio*, 378 U.S. 184, 197, 84 S. Ct. 1676, 12 L. Ed. 2d 793 (1964) (Stewart, J., concurring)).

Application of the two-part test can be guided by the rationale underlying the doctrine that abstract ideas are not patentable. The § 101 exceptions prevent a patentee from preempting further research, which the Court has explained as a concern because "[l]aws of nature, natural phenomena, and abstract ideas are the basic tools of scientific and technological work . . . Monopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it, thereby thwarting the primary object of the patent laws." *Alice*, 134 S.Ct. at 2354 (internal quotation marks omitted).

The preemption concern must also be considered in light of the field to which the patent is directed. If the claimed abstract idea "has no substantial practical application except in connection" with the particular field

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claimed, then allowing a claim to that idea, even if limited to a particular field, "would wholly pre-empt" the idea and "in practical effect would be a patent on the [idea] itself." *Gottschalk v. Benson*, 409 U.S. 63, 71-72, 93 S. Ct. 253, 34 L. Ed. 2d 273 (1972). In other words, even if an idea is only useful in one particular field, "limiting" a patent claim to that particular field is not enough to transform the idea into something patent-eligible because the idea would only work in that field anyway. In *Gottschalk*, for example, the claim was to a method, in a digital computer, of converting a decimal representation of a number to a binary representation. *Id.* at 65-66. Because that formula "has no substantial practical application except in connection with a digital computer, [allowing the claim] would wholly preempt the mathematical formula and in practical effect would be a patent on the algorithm itself." *Id.* at 71-72.

Courts must balance concerns about preemption with the reality that, at some level, all inventions use abstract ideas, laws of nature, and natural phenomena. *Alice*, 134 S.Ct. at 2354. That a claim involves an abstract concept is not enough to render the claim invalid; the claim must also preempt research or invention. The preempted area does not need to be broad. "[T]he underlying functional concern is a relative one: how much future innovation is foreclosed relative to the contribution of the inventor. A patent upon a narrow law of nature may not inhibit future research as seriously as would a patent upon Einstein's law of relativity, but the creative value of the discovery is also considerably smaller." *Mayo Collab. Servs. v. Prometheus Labs. Inc.*, 132 S.Ct. 1289, 1303, 182 L. Ed.

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2d 321 (2012) (citation omitted). Accordingly, in applying the § 101 exceptions, a court must distinguish patents that claim only ideas from those which claim ideas as part of something more. *Alice*, 134 S.Ct. at 2354; *Digitech Image Techs., LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) ("A claim may be eligible if it includes additional inventive features such that the claim scope does not solely capture the abstract idea.").

A claim directed to "a method of organizing human activity" seems presumptively patent ineligible. *Alice*, 134 S.Ct. at 2356. In *Alice*, the Court rejected the assertion that abstract ideas must be "preexisting, fundamental truth[s]," because the claims in *Bilski* were directed to a method of organizing human activity. *Id*. In *Alice*, however, the Court invalidated a claim "drawn to the concept of intermediated settlement," and did not state that the claim was merely a method of organizing human activity. *Id*. Relying on the characterization of *Bilski* in *Alice*, courts have invalidated patent claims which merely organized human activity. *See, e.g., Planet Bingo, LLC v. VKGS LLC*, No. 2013-1663, 576 Fed. Appx. 1005, 2014 U.S. App. LEXIS 16412, 2014 WL 4195188, at *2 (Fed. Cir. Aug. 26, 2014) (invalidating as an abstract idea a patent claim to "managing a bingo game.").

C. Procedural Bar

At the onset, Amdocs argues that this Court should deny defendants' motion because it is procedurally barred and contrary to the "law of the case." Opp'n at 7-10. In particular, Amdocs argues that Openet already presented

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summary judgment argument on the § 101 issue, but lost the motion after the Court found that there were genuine issues of material fact precluding summary judgment of invalidity. *Id.* at 10. Openet responds that the Court may consider validity because the Court never concluded that Amdocs's patents were drawn to eligible subject matter. Moreover, a court may revisit an interlocutory ruling (such as denial of summary judgment) at any time, and, in any event, *Alice* represents a change in substantive law as applied to this case. Reply at 11-13.

Openet has the better of this argument. Whether Amdocs's patents were drawn to eligible subject matter was not resolved by the Court, and even if the issue had been addressed *Alice* represents a change, or a significant clarification, of the law: "*Alice* . . . categorically establish[ed] a clear rule that had been previously subject to debate: 'mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.'" *Eclipse IP LLC v. McKinley Equipment Corp.*, No. SACV 14-742-GW, 2014 U.S. Dist. LEXIS 125529, 2014 WL 4407592, at *3 (CD. Cal. Sept. 4, 2014).[2] Accordingly, there is no bar to reaching the merits of Openet's motion.

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2. Further, the Supreme Court decided *Mayo* - the main case on which *Alice* relies - on March 20, 2012, which was after completion of summary judgment briefing. Amdocs filed the last brief regarding summary judgment on June 30, 2011, [Dkt. No. 166], and the last hearing regarding summary judgment was on July 25, 2011. *See* Transcript of July 25, 2011 Proceedings [Dkt. No. 240].

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D. Analysis Under § 101

1. '065 Patent

Amdocs alleges infringement of claims 1, 4, 7, 13, and 17 of the '065 Patent. Opp'n at 15. Claims 1, 7, and 13 are independent, claiming a computer program product, a method, and a system, respectively. *See* '065 Patent Col. 16. Claim 1 is representative:

> 1. A computer program product embodied on a computer readable storage medium for processing network account information comprising:
>
> computer code for receiving from a first source a first network accounting record;
>
> computer code for correlating the first network accounting record with accounting information available from a second source; and
>
> computer code for using the accounting information with which the first network accounting record is correlated to enhance the first network accounting record.

Both Amdocs and Openet only present arguments regarding claim 1; this accords with *Alice, Mayo*, and *Bilski*, in which the Supreme Court found that various claim types (method, system, etc.) directed to the same invention should rise and fall together. *See Alice*, 134 S.Ct.

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at 2360 (invalidating under § 101 system claims that were "no different from the method claims in substance.").

Openet argues that claim 1 of the '065 Patent is directed to the abstract idea of "correlating and enhancing network usage data," which is ineligible subject matter because it merely creates and merges two data sets, similar to the claim at issue in *Alice*. Openet's Br. at 7-8. Openet further argues that the claim is similar to the claims invalidated by the Federal Circuit in *Digitech Image Techs., LLC v. Electronics for Imaging, Inc. Id*. at 8 (citing *Digitech*, 758 F.3d 1344, 1350 (Fed. Cir. 2014)). Finally, Openet argues that the elements recited by claim 1 of the '065 Patent are merely conventional, and do not improve the functioning of the computer or effect an improvement in any technology or field. Openet's Br. at 9. Amdocs responds that the claim does not recite a fundamental economic practice or method of organizing human activity, and so is not similar to the claims found ineligible in *Bilski* and invalidated in *Alice*. Opp'n at 15. Further, Amdocs argues that the claim "is directed to a specific improvement to packet-based network billing technology" and therefore, to the extent that the claims recite an abstract idea, they recite sufficiently "more" to make the claim patent-eligible. *Id*. at 16.

To determine whether the claim is patent eligible, the Court employs the two-step analysis articulated in *Alice*. Step one requires determining whether the claim is directed to an abstract idea. On its face and looking past the mere claim language, claim 1 focuses on the concept of correlating two network accounting records to enhance the

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first record. As the claim satisfies step one by being drawn to an abstract idea, the court must turn to step two to determine whether the claim adds enough to the abstract idea to make the claim patent eligible. Here, claim 1 does not add to the idea of correlating two network accounting records. Indeed, it is difficult to conceive of broader terms with which the idea of correlating two records could be described. Claim 1 does not limit the correlation to any specific hardware, nor give any detail regarding how the records are "correlated" or "enhanced." Accordingly, the claim amounts to "nothing significantly more than an instruction to apply the abstract idea" of correlating two network accounting records "using some unspecified, generic" computer hardware. *See Alice*, 134 S.Ct. at 2360 (internal quotation marks omitted). Accordingly, claim 1 is invalid under 35 U.S.C. § 101.

This conclusion is buttressed by decisions from other courts which have held similar claims invalid. For example, the claim invalidated in *Alice* involved correlating a shadow credit record and a shadow debit record, and provided much more detail than does claim 1 of the '065 Patent. *Id.* at 2352 n.2. Similarly, the claim at issue in *Digitech* involved generating a device profile (*i.e.*, an enhanced record) from two other sets of data. 758 F.3d at 1350-51. In that case, the Federal Circuit found that "[w]ithout additional limitations, a process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible." *Id.* at 1351. In *Alice*, the Supreme Court found that "electronic recordkeeping" was "one of the most basic functions of a computer" and, therefore, the

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claim was directed to an abstract idea because the claim simply required a "generic computer to perform generic computer functions." 134 S.Ct. at 2359.

Claim 1 also implicates the preemption concerns that the Supreme Court indicated animate the § 101 eligibility exceptions. Because claim 1 "has no substantial practical application except in connection" with computer networks, finding claim 1 patent-eligible "would wholly preempt" essentially all research or development involving correlation of two accounting records over a network, and therefore "in practical effect would be a patent on the [idea] itself." *See Gottschalk v. Benson*, 409 U.S. 63, 71-72, 93 S. Ct. 253, 34 L. Ed. 2d 273 (1972). Claim 1 does not "integrate the [abstract idea] into something more," and therefore is not patent eligible. *Alice*, 134 S.Ct. at 2355.

Amdocs's arguments that the claim is patent eligible fail. First, Amdocs argues that that the claim is not directed to a fundamental economic practice, as in *Bilski*, or a method of organizing human activity, as in *Alice*. Opp'n at 15. Accordingly, Amdocs argues that because the claim is "far from a 'fundamental truth,'" it is patent eligible. *Id*. In *Alice*, however, the Supreme Court specifically found that abstract ideas were not limited to "preexisting, fundamental truth[s]." *Alice*, 134 S.Ct. at 2356.

Amdocs also argues that all asserted claims are patentable because the claims could not be performed by a human being alone. Opp'n at 12 (citing *Helios Software, LLC v. SpectorSoft Corp.*, No. 12-081-LPS, 2014 U.S. Dist. LEXIS 135379, 2014 WL 4796111, at *17 (D. Del. Sept.

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18, 2014)). *Alice* focuses the inquiry, however, on whether the claim is directed to an abstract idea, not on whether the claim could be performed by a human. *See Alice*, 134 S.Ct. at 2359-60. Although performance by a human may be sufficient to find that an idea is abstract, it is not necessary. *See id.*; *Digitech*, 758 F.3d at 1351. Accordingly, Amdocs's argument fails.

Amdocs also argues that, despite the spate of patents invalidated under 35 U.S.C. § 101 post-*Alice*, "no court has invalidated patent claims . . . directed to specific technology similar to the claims of the asserted patents." Opp'n at 11. That argument also fails. Courts have not only invalidated patents for business methods or methods of organizing human activity since *Alice*, but in *McRO, Inc. v. Activision Pub., Inc.* Judge Wu invalidated a patent to a novel method for animating lip synchronization and facial expressions of three-dimensional characters, even though he recognized that the patentee invented an innovative process. No. CV 14-336-GW, 2014 U.S. Dist. LEXIS 135152, 2014 WL 4759953, at *11 (CD. Cal. Sept. 22, 2014). The Supreme Court spoke broadly in *Alice*, and did not restrict its holding to any particular field or fields.

Finally, Amdocs presents a number of arguments regarding unclaimed aspects of how the invention operates. For example, Amdocs quotes this Court's previous memorandum opinion, which stated that "[t]he patented system collects . . . raw usage data records from their diffuse locations throughout the network and through appropriate filtering, aggregation, correlation, and enhancement transforms them into a format suitable

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for accounting." Opp'n at 15-16 (quoting January 22, 2013 Memorandum Opinion [Dkt. No. 259] at 6). As those features are unclaimed, they cannot affect patent eligibility.

Accordingly, claim 1 of the '065 patent, as well as claims 7 and 13, are directed to ineligible subject matter and are therefore invalid. Dependent claim 4 only adds that "the accounting information is in the form of a second network accounting record," and dependent claim 17 only adds that the system further includes "a module coupled to the plurality of data collectors, the module receives the records produced by the plurality of data collectors for aggregation purposes, and wherein the enhancement component resides in the module." Because the claims do not add sufficiently "more" to render them patent eligible, and Amdocs does not argue that they do, *see* Opp'n at 15-16 and 22-24, these claims are also invalid.

2. '510 Patent

Amdocs alleges infringement of claims 16, 17, and 19 of the '510 Patent. Opp'n at 15. Claims 16 is independent, claiming a computer program product. *See* '510 Patent Col. 17. Claim 16 provides:

> 16. A computer program product stored in a computer readable medium for reporting on a collection of network usage information from a plurality of network devices, comprising:

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computer code for collecting network communications usage information in real-time from a plurality of network devices at a plurality of layers;[3]

computer code for filtering and aggregating the network communications usage information;

computer code for completing a plurality of data records from the filtered and aggregated network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;

computer code for storing the plurality of data records in a database;

computer code for submitting queries to the database utilizing predetermined reports for retrieving information on the collection of the network usage information from the network devices; and

computer code for outputting a report based on the queries;

---

3. Information sent from one computer to another computer through a network must pass through one or more layers, depending on the source of the information. *See, e.g., Internetworking Technologies Handbook*, Cisco Systems, Inc. (4th ed. 2004) at 10-16. "Each layer in the source system adds control information to data, and each layer in the destination system analyzes and removes control information from that data." *Id.* at 13.

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wherein resource consumption queries are submitted to the database utilizing the reports for retrieving information on resource consumption in a network; and

wherein a resource consumption report is outputted based on the resource consumption queries.

Openet argues that claim 16 of the '510 Patent is directed to "[t]he abstract idea of . . . creation of a database of network usage information that can be queried to retrieve information on the collection of network usage information. Reports can be generated based on the queries and alerts can be set." Openet's Br. at 11. Openet argues that because the prior art included the use of batch processing, the computer implementation does not provide the inventive concept necessary at step two. *Id*. Further, Openet argues that the claim is drawn to a method of organizing human activity, as it could be performed by a human being with a file cabinet. *See id*. at 12. Amdocs responds that because the data is collected and processed by a physical device, the claims cover enhancements of network accounting records in a packet-based network, and the enhancement must occur close to the source of the usage information, the tasks cannot be performed by a human and therefore the claim is patent eligible. Opp'n at 19.

Claim 16 of the '510 Patent is not as manifestly broad as claim 1 of the '065 Patent. Accordingly, at step one of the *Alice* analysis, the concept at issue must be framed carefully, mindful of preemption while recognizing that

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at some level all patent claims involve an abstract idea or other building block of human knowledge. *Alice*, 134 S.Ct. at 2354. Claim 16 of the '510 Patent meets step one by being directed to the abstract idea of using a database to compile and report on network usage information. Therefore, step two analysis is appropriate to determine whether the claim adds enough to be patent eligible. Here, as with claim 1 of the '065 Patent, the claim does not add much to the idea of using a database to compile and report on network usage. In claim 16, a generic computer collects, filters, aggregates, and completes network communications information. '510 Patent Col. 17. The generic computer then stores the information in a database, and queries the database to retrieve reports. Collecting, filtering, aggregating, and completing network information amounts to "electronic recordkeeping," which is "one of the most basic functions of a computer." *Alice*, 134 S.Ct. at 2359. Similarly, storing and querying information in a database, and building reports based on that information, is one of the most basic functions of a database system. Accordingly, claim 16 is directed to a computer functioning in a conventional way, and a database functioning in a conventional way. The claim does not add any specific implementation beyond the abstract idea that information is collected and stored, and reports are generated. Therefore, the claim is directed to an unpatentable abstract idea.

Because asserted dependent claims 17 and 19 do not "transform" claim 16 to a patent-eligible application of an abstract idea (nor does Amdocs argue that they do, *see* Opp'n at 16-19), those claims are invalid for the same reason.

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3. '797 Patent

Amdocs alleges infringement of claims 1, 2, 7, 8, and 19 of the '797 Patent. Claims 1, 7, and 19 are independent, and claim 1 is representative:

> 1. A method for generating a single record reflecting multiple services for accounting purposes, comprising:
>
> (a) identifying a plurality of services carried out over a network;
>
> (b) collecting data describing the plurality of services; and
>
> (c) generating a single record including the collected data, wherein the single record represents each of the plurality of services;
>
> wherein the services include at least two services selected from a group consisting of a hypertext transfer protocol (HTTP) session, an electronic mail session, a multimedia streaming session, a voice over Internet Protocol (IP) session, a data communication session, an instant messaging session, a peer-to-peer network application session, a file transfer protocol (FTP) session, and a telnet session;
>
> wherein the data is collected utilizing an enhancement procedure defined utilizing a graphical user interface by:

> listing a plurality of available functions to be
> applied in real-time prior to end-user reporting;
>
> allowing a user to choose at least one of a
> plurality of fields, and
>
> allowing the user to choose at least one of the
> listed functions to be applied to the chosen field
> in real time prior to end-user reporting.

Openet argues that the claims of the '797 Patent are
directed to the abstract idea of "creation of a single record
for accounting purposes from information collected from
two of the specified services." Openet's Br. at 19. Amdocs
repeats its argument that the claims are not directed to
a "fundamental truth." Opp'n at 20. Amdocs also argues
that the '797 Patent specifically states how data is collected
- namely, "utilizing an enhancement procedure defined
utilizing a graphical user interface." *Id.* at 27.

Under step one of the *Alice* analysis, the abstract
idea in this claim is to generate a single record reflecting
multiple services. At step two, the claim does not appear to
add more than conventional computer functions operating
in a conventional manner. For example, a generic computer
identifies services, collects data, and generates a single
record. Again, this amounts to "electronic recordkeeping
. . . one of the most basic functions of a computer." *Alice*, 134
S.Ct. at 2359. The data is collected using an enhancement
procedure via a graphical user interface (GUI), which
is the conventional method for a user to interact with a
computer and computer data. The listed "services" are

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merely the conventional methods of computer network communication. Accordingly, the claim is directed to an abstract idea performed using purely conventional computer operations, and is, therefore, invalid under § 101.

As they are directed to essentially the same invention, claims 7 and 19 are also directed to ineligible subject matter. Dependent claims 2 and 8 do not add sufficiently "more" to render them patent eligible, and Amdocs does not argue that they do. *See* Opp'n at 26-27. Therefore, the asserted claims of the '797 Patent are also invalid.

4. '984 Patent

Amdocs alleges infringement of claim 1, 2, 7, 8, and 13. Claims 1 and 13 are independent, and claim 1 is representative:

> 1. A method for reporting on the collection of network usage information from a plurality of network devices, comprising:
>
> (a) collecting networks communications usage information in real-time from a plurality of network devices at a plurality of layers utilizing multiple gatherers each including a plurality of information source modules each interfacing with one of the network devices and capable of communicating using a protocol specific to the network device coupled thereto, the network devices selected from the group consisting of routers, switches, firewalls, authentication

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servers, web hosts, proxy servers, netflow servers, databases, mail servers, RADIUS servers, and domain name servers, the gatherers being positioned on a segment of the network on which the network devices coupled thereto are positioned for minimizing an impact of the gatherers on the network;

(b) filtering and aggregating the network communications usage information;

(c) completing a plurality of data records from the filtered and aggregated network communications usage information, the plurality of data records corresponding to network usage by a plurality of users;

(d) storing the plurality of data records in a database;

(e) allowing the selection of one of a plurality of reports for reporting purposes;

(f) submitting queries to the database utilizing the selected reports for retrieving information on the collection of the network usage information from the network devices; and

(g) outputting a report based on the queries.

Openet argues that the claims of the '984 Patent are directed to the abstract idea of "the creation of a 'queryable'

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database of network usage information." Openet's Br. at 14. Openet argues that the claims of the '984 Patent "add nothing more than generic and conventional computer hardware," and that "[t]he claim recites a litany of well-known 'network devices,' none of which is performing anything other than its typical and ordinary function." *Id.* Openet also argues that the claims could be performed by a human being. *Id.* Amdocs groups the '984 Patent with the '510 Patent, responding that the claim involves sufficiently more than the abstract idea itself, particularly adding information source modules and that the network devices communicate with specific protocols. Opp'n at 25.

In light of Amdocs's grouping of the asserted claims of the '984 Patent with the asserted claims of the '510 Patent, *see* Opp'n at 16-19 and 24-26, and admission at oral argument that such grouping is appropriate, Transcript of Oct. 24, 2014 Oral Argument [Dkt. No. 300] at 5-6, the asserted claims of the '984 Patent are invalid for the reasons supporting invalidity of the '510 Patent.

Even taken separately, the claims of the '984 Patent are invalid as directed to abstract ideas. Starting again at step one of *Alice*, the abstract idea at issue in this claim is reporting on the collection of network usage information from a plurality of network devices. At step two, the Court must determine whether the claims add sufficiently more to the abstract idea to render it patent eligible. At step (a), some device - presumably a generic computer - collects data communication usage information from a number of conventional devices for network communication.[4] In

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4. The claim also lists a "firewall," which is not a device at all.

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essence, the generic computer collects information from conventional devices to create records. This data collection occurs through gatherers, which are software. *See* col. 6 11. 25-35. At steps (b) through (g), the same generic computer performs filtering, completing, storing, allowing, submitting, and outputting. The generic computer interacts with a database, which stores records and responds to queries. All of those actions are conventional for both generic computers and generic databases.

As it is directed to essentially the same invention, claim 13 is also directed to ineligible subject matter. Dependent claims 2, 7, and 8 do not add sufficiently "more" to render them patent eligible, and Amdocs does not argue that they do. *See* Opp'n at 26-27. Therefore, the asserted claims of the '984 Patent are also invalid.

E. Response Regarding Novelty

Amdocs often argues that it developed a new process that solved a problem existing in the art. *See, e.g.*, Opp'n at 1, 6-7. That argument misses the point. The concern of § 101 is not novelty, but preemption. In *Alice*, the Supreme Court articulated concerns that claims to abstract ideas would preempt the "building blocks" of research - in essence, that people who merely had the idea of how to solve a problem, but did not actually know how to solve the problem, would prevent others from performing research and achieving actual solutions. *See* 134 S.Ct. at 2354. A person may have invented an entirely new and useful advance, but if the patent claims sweep too broadly, or only claim the idea that was achieved rather

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than implementation of the idea, § 101 directs that the patent is invalid. Amdocs's asserted claims recite such conventional operation, in such a general way, that even if the inventor had developed an actual working system, the patent claims could foreclose fields of research beyond the actual invention. Accordingly, all asserted claims are invalid as patent-ineligible.[5]

III. CONCLUSION

For the reasons stated above, Defendants' Motion for Judgment on the Pleadings [Dkt. No. 293] will be GRANTED by an appropriate Order to be issued with this Memorandum Opinion.

Entered this 24th day of October, 2014.

Alexandria, Virginia

/s/ Leonie M. Brinkema
Leonie M. Brinkema
United States District Judge

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5. At oral argument, Amdocs also argued that the asserted claims, across all four patents, were directed to eligible subject matter because a member of the public would have notice of which activities the patent covered and so could avoid infringement. Transcript of Oct. 24, 2014 Oral Argument [Dkt. No. 300] at 11-13. That argument misses the mark. The exceptions to § 101 seek to avoid preemption, not ensure that the patent provides adequate notice to the public. Instead, 35 U.S.C. § 112 addresses the notice function. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S.Ct. 2120, 2130, 189 L. Ed. 2d 37 (2014).

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ORDER

For the reasons stated in the accompanying Memorandum Opinion, Defendants' Motion for Judgment on the Pleadings [Dkt. No. 293] is GRANTED, and it is hereby

ORDERED that judgment be and is entered in favor of the defendants.

The Clerk is directed to enter judgment in defendants' favor pursuant to Fed. R. Civ. P. 58 and forward copies of this Order and the accompanying Memorandum Opinion to counsel of record.

Entered this 24th day of October, 2014.

Alexandria, Virginia

/s/ Leonie M. Brinkema
Leonie M. Brinkema
United States District Judge

APPENDIX C — JUDGMENT OF THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA, ALEXANDRIA DIVISION, FILED OCTOBER 24, 2014

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division

Civil Action No. 1:10cv910 (LMB/TRJ)

AMDOCS (ISRAEL) LIMITED,
AN ISRAELI CORPORATION,

Plaintiff,

v.

OPENET TELECOM, INC.,
A DELAWARE CORPORATION, *et al.*,

Defendants.

JUDGMENT

Pursuant to the order of this Court entered on October 24, 2014 and in accordance with Fed. R. Civ. P. 58, JUDGMENT is hereby entered in favor of the defendants Openet Telecom, Inc., a Delaware Corporation, *et al.*

FERNANDO GALINDO, CLERK

by: /s/_____
Y. Guyton, Deputy Clerk

Dated: 10/24/2014
Alexandria, Virginia

APPENDIX D — DENIAL OF REHEARING OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT, FILED MARCH 9, 2017

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

2015-1180

AMDOCS (ISRAEL) LIMITED,

Plaintiff-Appellant,

v.

OPENET TELECOM, INC.,
OPENET TELECOM LTD.,

Defendants-Appellees.

Appeal from the United States District Court for the Eastern District of Virginia in No. 1:10-cv-00910-LMB-TRJ, Judge Leonie M. Brinkema.

ON PETITION FOR *EN BANC* REHEARING

Before PROST, *Chief Judge*, NEWMAN, PLAGER,[1] LOURIE, DYK, MOORE, O'MALLEY, REYNA, WALLACH, TARANTO, CHEN, HUGHES, and STOLL, *Circuit Judges.*

PER CURIAM.

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1. Circuit Judge Plager participated only in the decision on the panel portion of the rehearing petition.

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ORDER

Appellees filed a petition for rehearing *en banc*. A response to the petition was invited by the court and filed by the appellant. The petition was first referred as a petition for rehearing to the panel that heard the appeal, and thereafter was referred to the circuit judges who are in regular active service.

Upon consideration thereof.

IT IS ORDERED THAT:

The petition for panel rehearing was denied.

The petition for rehearing *en banc* is denied.

The mandate of the court will issue on March 16, 2017.

For the Court

March 9, 2017   /s/ Peter R. Marksteiner
    Date   Peter R. Marksteiner
                                 Clerk