

**United States Court of Appeals
for the Federal Circuit**

**TRINITY INFO MEDIA, LLC, FKA TRINITY INTEL
MEDIA, LLC,**
Plaintiff-Appellant

v.

COVALENT, INC.,
Defendant-Appellee

2022-1308

Appeal from the United States District Court for the
Central District of California in No. 2:21-cv-01360-JWH-
MRW, Judge John W. Holcomb.

Decided: July 14, 2023

GREGORY HILLYER, Hillyer Legal, PLLC, Washington,
DC, argued for plaintiff-appellant.

THOMAS DIETRICH, McArthur Law Firm PC, Beverly
Hills, CA, argued for defendant-appellee.

Before STOLL, BRYSON, and CUNNINGHAM, *Circuit Judges*.
CUNNINGHAM, *Circuit Judge*.

Trinity Info Media, LLC sued Covalent, Inc. for infringement of patent claims relating to methods and systems for connecting users based on their answers to polling questions. The United States District Court for the Central District of California granted Covalent’s motion to dismiss, concluding that the asserted patents do not claim patentable subject matter under 35 U.S.C. § 101. *Trinity Info Media, LLC v. Covalent, Inc.*, 562 F. Supp. 3d 770 (C.D. Cal. 2021) (“*Decision*”). We affirm.

I. BACKGROUND

In February 2021, Trinity sued Covalent and asserted U.S. Patent Nos. 9,087,321 and 10,936,685, entitled “Poll-Based Networking System.” J.A. 30; J.A. 73–88 (Amended Complaint); ’321 patent; ’685 patent.¹ More specifically, the ’321 patent teaches that its claimed invention is “directed to a poll-based networking system that connects users based on similarities as determined through poll answering and provides real-time results to the users.” ’321 patent col. 1 ll. 53–56. The ’321 patent explains that “[w]hile considering the failure of others to make use of all of the above components in this technology space, the inventors unexpectedly realized that using a plurality of match servers would allow the system to quickly connect the users based on their similarities.” *Id.* col. 1 ll. 56–60. The ’685 patent is similar to the ’321 patent, but it contains additional disclosures discussing progressive polling for ecommerce systems. ’685 patent col. 2 l. 1 to col. 3. l. 60. The claimed invention of the ’685 patent is “directed to a poll-based networking and ecommerce system that connects users to other users, or products, goods and/or services based on similarities as determined through poll

¹ The ’685 patent is related to the ’321 patent, and both patents trace their priority date to U.S. Provisional Application No. 61/309,038, filed on March 1, 2010. ’321 patent col. 1 ll. 5–7; ’685 patent col. 1 ll. 6–15.

answering and provides real-time results to the users.” *Id.* col. 2 ll. 3–7.

Trinity asserted claims 1–3, 8, and 20 of the ’321 patent and claims 2, 3, 12–14, 16, 17, 20–22, 24, and 25 of the ’685 patent. *Decision* at 776. Independent Claim 1² of the ’321 patent recites:

1. A poll-based networking system, comprising:

a data processing system having one or more processors and a memory, the memory being specifically encoded with instructions such that when executed, the instructions cause the one or more processors to perform operations of:

receiving user information from a user to generate a unique user profile for the user;

providing the user a first polling question, the first polling question having a finite set of answers and a unique identification;

receiving and storing a selected answer for the first polling question;

² We focus our analysis on those claims and limitations that Trinity, the patentee, relies upon to argue that the asserted claims are patent eligible under § 101. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018) (“Courts may treat a claim as representative in certain situations, such as if the patentee does not present any meaningful argument for the distinctive significance of any claim limitations not found in the representative claim or if the parties agree to treat a claim as representative.”).

comparing the selected answer against the selected answers of other users, based on the unique identification, to generate a likelihood of match between the user and each of the other users; and

displaying to the user the user profiles of other users that have a likelihood of match within a predetermined threshold.

'321 patent claim 1. Independent claim 19 describes the limitations of claim 1 as a “computer program product for creating a poll-based network” instead of a “poll-based networking system.” *Id.* claim 19.

Independent claim 2 of the '685 patent recites:

2. A computer-implemented method for creating a poll-based network, the method comprising an act of causing one or more processors having an associated memory specifically encoded with computer executable instruction means to execute the instruction means to cause the one or more processors to collectively perform operations of:

receiving user information from a user to generate a unique user profile for the user;

providing the user one or more polling questions, the one or more polling questions having a finite set of answers and a unique identification;

receiving and storing a selected answer for the one or more polling questions;

comparing the selected answer against the selected answers of other users, based on the unique identification, to generate a

likelihood of match between the user and each of the other users;

causing to be displayed to the user other users, that have a likelihood of match within a predetermined threshold;

wherein one or more of the operations are carried out on a hand-held device; and wherein two or more results based on the likelihood of match are displayed in a list reviewable by swiping from one result to another.

'685 patent claim 2. Independent claim 3 of the '685 patent recites many of the limitations of claim 2 as a “computer program product for creating a poll-based network” instead of a “computer-implemented method.” *Id.* claim 3.

Covalent filed a motion to dismiss Trinity's amended complaint, arguing that the asserted claims are invalid under 35 U.S.C. § 101. *Decision* at 778. The district court granted Covalent's motion after finding that the asserted claims were directed to the abstract idea of “matching users who gave corresponding answers to a question” and did not contain an inventive concept. *Id.* at 782–88. The district court further described claim 1 of the '321 patent as not improving computer functionality but instead using “generic computer components as tools to perform the functions faster than a human would.” *Id.* at 782.

Trinity appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

II. DISCUSSION

We apply the law of the regional circuit to review a district court's grant of a motion to dismiss. *See Bot M8 LLC v. Sony Corp. of Am.*, 4 F.4th 1342, 1353 (Fed. Cir. 2021). The Ninth Circuit reviews the grant of a 12(b)(6) motion to dismiss de novo, accepting all factual allegations in the

complaint as true and construing the pleadings in the light most favorable to the nonmovant. *Id.* (citing *Knieval v. ESPN*, 393 F.3d 1068, 1072 (9th Cir. 2005)).

“Patent eligibility is a question of law that may involve underlying questions of fact,” “[b]ut ‘not every § 101 determination contains genuine disputes over the underlying facts material to the § 101 inquiry.’” *PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310, 1314 (Fed. Cir. 2021) (first citing *Simio, LLC v. FlexSim Software Prods., Inc.*, 983 F.3d 1353, 1358–59 (Fed. Cir. 2020); and then quoting *Berkheimer*, 881 F.3d at 1368). “We review the district court’s ultimate patent-eligibility conclusion de novo.” *Id.* at 1315 (citing *Simio*, 983 F.3d at 1359).

Section 101 of the Patent Act defines patent-eligible subject matter as “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. The Supreme Court has long held that there is an “implicit exception” in § 101—“[l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). To do so, we apply the two-step framework set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 77–80 (2012), and further detailed in *Alice*. At step one, we “determine whether the claims at issue are directed to one of those patent-ineligible concepts” such as an abstract idea. *Alice*, 573 U.S. at 217. At step two, we “consider the 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*, 566 U.S. at 78–79) (cleaned up). “We have described step two of this analysis as a search 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.” *Id.* at 217–18 (brackets in original) (quoting *Mayo*, 566 U.S. at 72–73).

As an initial matter, Trinity argues that the district court needed to conduct claim construction and fact discovery before analyzing the asserted claims under § 101. Appellant’s Br. 35–38. We disagree. “[W]e have repeatedly affirmed § 101 rejections at the motion to dismiss stage, before claim construction or significant discovery has commenced.” *Cleveland Clinic Found. v. True Health Diagnostics LLC*, 859 F.3d 1352, 1360 (Fed. Cir. 2017) (collecting cases). A patentee must do more than invoke a generic need for claim construction or discovery to avoid grant of a motion to dismiss under § 101. Instead, the patentee must propose a specific claim construction or identify specific facts that need development and explain why those circumstances must be resolved before the scope of the claims can be understood for § 101 purposes. *See id.* (affirming dismissal based on § 101 where patentee “provided no proposed construction of any terms or proposed expert testimony that would change the § 101 analysis”); *see also Simio*, 983 F.3d at 1365 (“The main problem with this argument is that Simio has not explained how it might benefit from any particular term’s construction under an *Alice* § 101 analysis.”).³ Because Trinity did not identify a proposed claim construction or specific facts to be

³ As another example, we recently affirmed a district court’s decision that it would be futile, for purposes of § 101, for a patentee to amend its complaint where the “proposed amendment merely sought to add conclusory statements that the claimed steps were not well-known, routine, and conventional.” *Sanderling Mgmt. Ltd. v. Snap Inc.*, 65 F.4th 698, 706 (Fed. Cir. 2023).

discovered that would change our analysis,⁴ we proceed to analyzing the asserted claims under § 101.

A. *Alice/Mayo* Step One

We must first determine whether the asserted claims are directed to a patent-ineligible concept, such as an abstract idea. We conclude that they are directed to the abstract idea of matching based on questioning. We find Trinity’s arguments to the contrary unpersuasive.

i.

To determine whether a claim is “directed to” a patent ineligible concept, we evaluate “the focus of the claimed advance over the prior art to determine if the claim’s character as a whole is directed to excluded subject matter.” *PersonalWeb*, 8 F.4th at 1315 (quoting *Intell. Ventures I LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1325 (Fed. Cir. 2017)) (cleaned up). “[W]hile the specification may help illuminate the true focus of a claim, when analyzing patent eligibility, reliance on the specification must always yield to the claim language in identifying that focus.” *Charge-Point, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 766 (Fed. Cir. 2019).

Courts must ascertain the “basic character of the [claimed] subject matter” without describing the claims at “such a high level of abstraction and untethered from the

⁴ At oral argument, the district court asked Trinity “[w]hich limitation in claim one requires construction in your view?” J.A. 148. Trinity responded by identifying those claim terms it believed required construction: receiving, storing, and comparing based on a unique identifier. J.A. 149; *see also* Appellant’s Br. 35–36. But Trinity did not identify any proposed construction of those terms, nor did it explain how that proposed construction would affect an analysis under § 101. J.A. 149.

language of the claims” that the claims would be virtually guaranteed to be abstract. *Compare Internet Pats. Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1348 (Fed. Cir. 2015) (agreeing “character” of claims was abstract idea of “retaining information in the navigation of online forms”), *with Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337–39 (Fed. Cir. 2016) (finding claims directed to self-referential database table were not directed to an abstract idea); *see also Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (concluding “focus of the asserted claims” was on “collecting information, analyzing it, and displaying certain results of the collection and analysis”).

A “telltale sign of abstraction” is when the claimed functions are “mental processes that ‘can be performed in the human mind’ or ‘using a pencil and paper.’” *Personal-Web*, 8 F.4th at 1316 (quoting *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1371–72 (Fed. Cir. 2011)). We have previously found “analyzing information by steps people go through in their minds” and “collecting information, including when limited to particular content” to be abstract. *Elec. Power*, 830 F.3d at 1353–54 (“[M]erely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis.”); *see also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (“[S]electing certain information, analyzing it using mathematical techniques, and reporting or displaying the results of the analysis . . . is all abstract.”).

Independent claims 1 and 19 of the ’321 patent require: (1) receiving user information; (2) providing a polling question; (3) receiving and storing an answer; (4) comparing that answer to generate a “likelihood of match” with other users; and (5) displaying certain user profiles based on that likelihood. ’321 patent claims 1 and 19. Independent claims 2 and 3 of the ’685 patent generally require many of the same steps, but they add reviewing matches using

swiping and using a “hand-held device.” ’685 patent claims 2 and 3. These independent claims are focused on “collecting information, analyzing it, and displaying certain results,” which places them in the “familiar class of claims ‘directed to’ a patent-ineligible concept.” *See Elec. Power*, 830 F.3d at 1353; *see also Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1358–59, 1364–65 (Fed. Cir. 2021) (finding claims using a “relevancy-matching server” to deliver targeted data based on “content identification data” and a “relevancy factor” directed to an abstract idea). A human mind could review people’s answers to questions and identify matches based on those answers. We agree with the district court that the independent claims of both patents are directed to an abstract idea, matching based on questioning. *Decision* at 782–83.

The ’685 patent’s requirements that the abstract idea be performed on a “hand-held device” or that matches are “reviewable by swiping” does not alter our conclusion that the focus of the asserted claims remains directed to an abstract idea. *See, e.g., In re TLI Commc’ns LLC Pat. Litig.*, 823 F.3d 607, 613 (Fed. Cir. 2016) (“[A]lthough the claims limit the abstract idea to a particular environment—a mobile telephone system—that does not make the claims any less abstract for the step 1 analysis.”). Nor are we persuaded that dependent claim 8 of the ’321 patent—further requiring processors configured to perform operations with web servers, a database, and a match aggregator—changes the focus of the asserted claims. *See id.*; *see also Charge-Point*, 920 F.3d at 766–67, 770 (adding networking capabilities to facilitate network communication did not prevent the claim from being directed to an abstract idea); *Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1333, 1337–40 (Fed. Cir. 2017) (finding claims involving “improved scalable architecture for delivering real-time information” invalid under § 101). And the remaining dependent claims merely add trivial variations of the abstract idea—performing matches based on gender,

varying the number of questions asked, and/or displaying other users' answers—that do not change the focus of the asserted claims. *Decision* at 783–86; '321 patent claims 2–3, 20; '685 patent claims 12–14, 16–17, 20–22, 24–25.

In the context of software-based inventions, *Alice/Mayo* step one “often turns on whether the claims focus on the specific asserted improvement in computer capabilities or, instead, on a process that qualifies as an abstract idea for which computers are invoked merely as a tool.” *In re Killian*, 45 F.4th 1373, 1382 (Fed. Cir. 2022) (quoting *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1303 (Fed. Cir. 2018)) (cleaned up). The patents' specifications confirm that the asserted claims are directed to an abstract idea that merely seeks to use computers as a tool, not on an improvement in computer capabilities. *See Charge-Point*, 920 F.3d at 767–68 (relying on “problem facing the inventor” defined in the patent specification as part of the analysis to confirm claims were “directed to” abstract idea); *see also TLI Commc'ns*, 823 F.3d at 612 (finding inventor's “problem” was not “how to combine a camera with a cellular telephone” or “how to transmit images via a cellular network,” but “recording, administration and archiving of digital images simply, fast and in such way that the information therefore may be easily tracked”) (cleaned up).

The specifications frame the inventor's problem in terms of how to improve existing polling systems by performing progressive polling, not how to improve computer technology. '321 patent col. 1 ll. 35–56; *see also* '685 patent col. 1 l. 46 to col. 2 l. 7 (minor differences). In describing the invention, the specifications focus on the details of receiving and comparing answers to generate matches—varying the questions asked, limiting the number of matches displayed, and generating a “match percentage” or “match number.” '321 patent col. 5 l. 53 to col. 6 l. 52; '685 patent col. 6 l. 33 to col. 8 l. 37. Repeatedly, the patents confirm they do not limit the invention to specific technological solutions. '321 patent col. 4 ll. 2–4 (“[T]he present invention

may be practiced without necessarily being limited to these specific details.”), col. 6 ll. 30–31 (“[T]here are numerous techniques for determining a likelihood of match”), col. 8 ll. 51–53 (“The physical connections of the Internet and the protocols and communication procedures of the Internet are well known to those of skill in the art.”); *see also* ’685 patent col. 4 ll. 40–43, col. 8 ll. 4–7, col. 10 ll. 41–44. These passages confirm that the problem facing the inventor was how to perform the abstract idea of matching based on questioning, not an improvement to computer technology.

ii.

Next, we consider—and reject—several arguments raised by Trinity as to why its claims are not directed to an abstract idea.

Trinity argues that the district court’s analysis at *Alice/Mayo* step one failed to appreciate several statements in its amended complaint demonstrating that the patents included an advance over the prior art. Appellant’s Br. 25 (prior art did not carry out matching on mobile phone), 26 (prior art did not employ “multiple match servers”), 27 (prior art did not employ “match aggregator[s]”). These statements do not change our analysis at *Alice/Mayo* step one. Even accepting these statements as true, the claims are directed to nothing more than performing the abstract idea of matching on a mobile phone. *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) (“[A] claim for a *new* abstract idea is still an abstract idea.”). Our focus is on the claims, as informed by the specification. *See, e.g., ChargePoint*, 920 F.3d at 766.

Trinity also argues that humans could not mentally engage in the “same *claimed* process” because they could not perform “nanosecond comparisons” and aggregate “result values with huge numbers of polls and members,” nor could they select criteria using “servers, storage, identifiers, and/or thresholds.” Appellant’s Br. 31. Notably, Trinity’s

arguments are not tethered to *the asserted claims*, which do not require “nanosecond comparisons” or aggregating “huge numbers of polls and members.” *See, e.g.*, ’321 patent claims 1 and 8; *see, e.g.*, ’685 patent claim 2. Moreover, although a human could not “detect[] events on an interconnected electric power grid in real time over a wide area and automatically analyz[e] the events on the interconnected electric power grid,” we nevertheless found such claims to be directed to an abstract idea in *Electric Power Group*. 830 F.3d at 1351, 1353–54. Similarly, a human could not communicate over a computer network without the use of a computer, yet we held that claims directed to enabling “communication over a network” were focused on an abstract idea in *ChargePoint*. 920 F.3d at 766–67. Likewise, Trinity’s asserted claims can be directed to an abstract idea even if the claims require generic computer components or require operations that a human could not perform as quickly as a computer.

Trinity compares this case to other decisions where we found the patented invention to be directed to improvements to the functionality of a computer or network platform itself. Appellant’s Br. 30–31. But Trinity relies on generic computing terms—*e.g.*, “data processing system,” “processors,” “memory”—that provide a generic technical environment for performing the abstract idea. *See TLI Commc’ns*, 823 F.3d at 611 (noting that “telephone unit” and “server” “merely provide a generic environment in which to carry out the abstract idea”). Both patents-in-suit confirm the asserted claims do not require specialized computing components. ’321 patent col. 9 ll. 56–59 (“The computer system may be a conventional computer system that can be used as a member computer system or a server computer system or as a web server computer system.”), col. 10 ll. 10–12 (conventional microprocessor), col. 10 ll. 13–15 (memory can be dynamic random access memory (DRAM) or static ram (SRAM)); *see also* ’685 patent col. 10 ll. 49–52, col. 12 ll. 4–9. The ’685 patent teaches that the “advent of

the internet and mobile phones” allowed the establishment of a “plethora” of “mobile apps.” ’685 patent col. 1 ll. 27–29. The ’685 patent also does not purport to have invented swiping or to improve on that process. *See, e.g., Charge-Point*, 920 F.3d at 768 (reviewing specification for “what it states *and what it does not*”) (emphasis added)). In other words, the specification does not support a finding that the claims are directed to a technological improvement in computer or mobile phone functionality.

Trinity further argues the district court failed to adequately consider comparing a selected answer against other users “based on the unique identification,” which Trinity asserts was a “non-traditional design” that allowed for “rapid comparison and aggregation of result values even with large numbers of polls and members.” Appellant’s Br. 27. We disagree. The use of a unique identifier does not prevent a claim from being directed to an abstract idea. *Secured Mail Sols. LLC v. Universal Wilde, Inc.*, 873 F.3d 905, 910 (Fed. Cir. 2017) (“The fact that an identifier can be used to make a process more efficient, however, does not necessarily render an abstract idea less abstract.”). Nor are we persuaded that the purported “non-traditional design” makes the asserted claims not directed to an abstract idea. *See* Appellant’s Br. 27. Trinity points to an “in-memory, two-dimensional array” that “provides for linear speed across multiple match servers” and permits “an immediate comparison to determine if the user had the same answer to that of another user.” *Id.* While dependent claim 7 of the ’321 patent requires an “in memory, two-dimensional array,” the *asserted claims* do not. *See, e.g.,* ’321 patent claim 8.

Trinity also points to the use of “match servers” and “a match aggregator” to identify matches. Appellant’s Br. 26–27. Of the asserted claims, only dependent claim 8 of the ’321 patent requires that processors be configured to perform operations involving a “match aggregator” and “web server” and storing “answers in a database.” ’321

patent claim 8. As discussed above, these components merely place the abstract idea in the context of a distributed networking system, which in the context of the claimed invention as described in the specification does not change the focus of the asserted claims from an abstract idea.

Finally, Trinity argues that the district court omitted the limitation of generating a likelihood of match “within a predetermined threshold,” without which “there would be no limit or logic associated with the volume or type of results a user would receive.” Appellant’s Br. 28. We are not convinced that this limitation changes the focus of the claimed invention to something other than the abstract idea of matching based on questioning. Indeed, this limitation merely reflects the kind of data analysis that the abstract idea of matching necessarily includes (e.g., how many answers should be the same before declaring a match).

In conclusion, the asserted claims are directed to the abstract idea of matching based on questioning.

B. *Alice/Mayo* Step Two

At *Alice/Mayo* step two, we “consider the elements of [the] 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.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79, 78). “[T]ransformation into a patent-eligible application requires more than simply stating the abstract idea while adding the words ‘apply it.’” *Id.* at 221 (quoting *Mayo*, 566 U.S. at 72) (cleaned up). Where a claim is directed to an abstract idea, the claim must include “an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 72–73 (cleaned up)).

Trinity argues that the district court failed to consider allegations in its amended complaint that several features of the asserted claims were not “well-understood, routine or conventional.” Appellant’s Br. 32; *see also* J.A. 78 (Amended Complaint) ¶ 32 (listing features purportedly not present in the prior art). Taken as an ordered combination, Trinity argues claim 1 of the ’321 patent and claim 2 of the ’685 patent contain an inventive concept because they recite steps performed in a “non-traditional system” that can “rapidly connect multiple users using progressive polling that compare[s] answers in real time based on their unique identification (ID) (and in the case of the ’685 patent employ swiping).” Appellant’s Br. 33. Trinity also argues that dependent claims 2, 3, 8, and 19 of the ’321 patent contain an inventive concept because they specify matching based on “all polls the user previously answered (based on unique identifications)” and include hardware components, “including a server, a database, a match aggregator and a plurality of match servers.” Appellant’s Br. 34–35. We disagree.

Trinity’s amended complaint fails to adequately allege that the asserted claims contain inventive concepts such that they survive a § 101 motion. *See Simio*, 983 F.3d at 1365 (“We disregard conclusory statements when evaluating a complaint under Rule 12(b)(6).”). For example, Trinity’s amended complaint states that “the prior art did not include, alone or in any combination” certain features, including (1) real-time matching based on progressive polling, (2) using match servers and a match aggregator, (3) using a mobile device, (4) displaying matches reviewable by swiping, and (5) using a mobile application. J.A. 78 (¶ 32). This conclusion follows several paragraphs that allege the present invention “includes an advance over the prior art and an improvement over a general-purpose computer” because it uses certain features. J.A. 78 (¶ 29) (describing “carrying out one or more operations . . . on a handheld device”); J.A. 78 (¶ 30) (same for “swiping”);

J.A. 78 (¶ 31) (same for mobile application). Trinity also alleged that a poll-based networking system matching users in real-time “represents a significant advance over the art.” J.A. 77 (¶ 27). These conclusory allegations that the prior art lacked elements of the asserted claims are insufficient to demonstrate an inventive concept. *See Simio*, 983 F.3d at 1365 (“A statement that a feature ‘improves the functioning and operations of the computer’ is, by itself, conclusory.”); *see also Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014) (“That some of the eleven steps were not previously employed in this art is not enough—standing alone—to confer patent eligibility upon the claims at issue.”).

Whether viewing the claim limitations individually or as an ordered combination, the asserted claims do not add an inventive concept that would be “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.” *Alice*, 573 U.S. at 217–18 (quoting *Mayo*, 566 U.S. at 72–73). Trinity’s arguments as to inventiveness merely reflect the improved speed inherent with applying the abstract idea using a computer. *See Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1364 (Fed. Cir. 2020) (“[C]laiming the improved speed or efficiency inherent with applying the abstract idea on a computer [is] insufficient to render the claims patent eligible as an improvement to computer functionality.” (citation omitted) (cleaned up)); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (“[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.”). Nor do we see anything inventive in the ordered combination of elements. *See Two-Way Media*, 874 F.3d at 1341 (“The steps are organized in a completely conventional way—data are first processed, sent, and once sent, information about the transmission is recorded.”). So too here, the asserted claims are organized in an expected way—receiving user information, asking

that user questions, receiving answers, identifying and displaying a match based on those answers.

We are also not persuaded by Trinity's argument that the asserted claims include an inventive concept because they use "multiple processors, match servers, unique identifications and/or a match aggregator." Appellant's Br. 32. Again, we note that of the asserted claims, many of these features are specific to dependent claim 8.⁵ See '321 patent claim 8. We have "ruled many times" that "invocations of computers and networks that are not even arguably inventive are insufficient to pass the test of an inventive concept in the application of an abstract idea." *SAP Am.*, 898 F.3d at 1170 (quoting *Elec. Power*, 830 F.3d at 1355). Thus, we found no inventive concept where claims merely recited "generic features" or "routine functions" to implement the underlying abstract idea. *Free Stream Media*, 996 F.3d at 1366; see also *PersonalWeb*, 8 F.4th at 1316, 1318–19 (claims using "a generic hash function, a server system, or

⁵ At oral argument on appeal, Trinity emphasized the importance of the "unique identification" in the asserted claims. Oral Arg. at 5:17–7:03, https://oralarguments.cafc.uscourts.gov/default.aspx?fl=22-1308_11022022.mp3 ("[T]he unique identifier finds a position in the collection of match servers, so that when the searching is conducted, it can be done instantaneously."); see also Appellant's Br. 26, 32–33. The asserted claims place no such limits as to what can qualify as a "unique ID," and the specifications confirm that a "unique ID" merely needs to be "unique" within the context of a single answer. '321 patent col. 6 ll. 2–3 ("Each poll answer has a unique ID within that poll, starting at 0 and going to N-1 where N is the number of answers."); see also '685 patent col. 6 ll. 50–52. Assigning a unique ID for the answers to a question is simply a way of organizing human activity; it is not an inventive concept. See *Secured Mail*, 873 F.3d at 911.

a computer” did not add “significantly more” to the abstract idea of using content-based identifiers to manage data). Similarly, in *SAP America*, we disagreed that claims using databases and multiple processors added an inventive concept where the claims merely required “already available computers, with their already available basic functions, to use as tools in executing the claimed process.” 898 F.3d at 1169–70. These same principles apply to the asserted claims, which use general-purpose processors to perform the steps of collecting, transmitting, receiving, and compiling users’ answers and matches. *See, e.g.*, ’321 patent claim 8. Thus, we conclude that the asserted patent claims—and specifically, claim 8 of the ’321 patent—do not provide an inventive concept by virtue of their use of multiple processors, match servers, unique identifications and/or a match aggregator.

Our conclusion is confirmed by the ’321 patent’s specification. Rather than focus on how to implement a distributed architecture, the ’321 patent teaches the use of “conventional” processors, the use of a “web server computer 804” that can be a “conventional server computer system” inclusive of the “match aggregator and/or match server,” and that “[t]he physical connections of the Internet and the protocols and communication procedures of the Internet are well known to those of skill in the art.” ’321 patent col. 8 l. 51 to col. 9 l. 5, col. 10 ll. 10–12. These conventional components used in an expected manner do not provide an inventive concept.

We are also not persuaded by Trinity’s argument that certain claims contain an inventive concept because they are performed on a handheld device, use a matching application, or permit review of matches using swiping. Appellant’s Br. 32. Just as a claim is not rendered patent eligible by stating an abstract idea and instructing “apply it on a computer,” a claim is not rendered patent eligible merely because the abstract idea is applied on a handheld device or using a mobile application. *See TLI Commc’ns*, 823 F.3d

at 615. Indeed, the '685 patent teaches that mobile phones and mobile applications had been established by the time of its invention, '685 patent col. 1 ll. 27–29, which confirms that the mere use of a mobile device, matching application, and/or “swiping” on a mobile device was not inventive.

Reviewing the remaining asserted claims, we see only trivial variations of the limitations discussed above. Performing matches based on gender ('685 patent claims 12–14 and 20–22), varying the number of questions asked ('321 patent claims 2–3 and 20; '685 patent claims 16 and 24), and/or displaying other users' answers ('685 patent claims 17 and 25) are all “insignificant data-gathering steps” that “add nothing of practical significance to the underlying abstract idea.” *OIP Techs.*, 788 F.3d at 1364 (quoting *Ultramercial*, 772 F.3d at 716) (adding “routine additional steps” insufficient to transform an abstract idea into patent-eligible subject matter). We agree with the district court that all asserted claims fail step two of the *Alice/Mayo* inquiry.

III. CONCLUSION

We have considered Trinity's remaining arguments and find them unpersuasive. The asserted claims are patent ineligible under § 101. For the reasons discussed above, we affirm the district court's judgment.

AFFIRMED