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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte VINCENT P. ANNUNZIATA

Appeal 2018-006617
Application 12/070,138
Technology Center 3600

Before MICHAEL W. KIM, NINA L. MEDLOCK, and
JAMES A. WORTH, *Administrative Patent Judges*.

MEDLOCK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner’s final rejection of claims 13–18, 37–39, 41, and 42. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the term “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Our decision references Appellant’s Appeal Brief (“Appeal Br.,” filed December 18, 2017) and Reply Brief (“Reply Br.,” filed June 14, 2018), and the Examiner’s Answer (“Ans.,” mailed May 3, 2018) and Final Office Action (“Final Act.,” mailed July 28, 2017). Appellant identifies “TRADECAPTURE OTC CORP” as the real party in interest. Appeal Br. 1.

CLAIMED INVENTION

Appellant describes that the claimed invention “relates to a system for trading commodities and the like over the Internet” (Spec. ¶ 2).

Claims 13 and 37 are the independent claims on appeal. Claim 13, reproduced below with bracketed notations added, is illustrative of the claimed subject matter:

13. A system for efficient data storage and retrieval comprising:

[(a)] one or more computers;

[(b)] a user device comprising a display;

[(c)] a communications link between the one or more computers and the user device;

[(d)] at least two computerized exchanges, each transacting at least one commodity among a plurality of commodities, executing on the one or more computers and accessible by users having proper exchange permissions for each of the at least two computerized exchanges;

[(e)] an indication database, accessible by the one or more computers, storing a plurality of indications, the plurality of indications corresponding to each of the at least two computerized exchanges, the plurality of indications organized in the indication database according to a commodity among the plurality of commodities to which each respective indication relates;

[(f)] a user database, accessible by the one or more computers, storing a plurality of user files such that at least one user file is associated with a specified user among the users of the system and further containing two or more exchange permissions indicating two or more specific exchanges among the at least two computerized exchanges and one or more specific commodities associated with each of the two or more specific exchanges to which the specified user may access; and

[(g)] software executing on at least one computer of the one or more computers that causes the at least one computer to:

[(g1)] pool, for the specified user, indications among the plurality of indications submitted to the at least two computerized exchanges by:

querying the user database for the at least one user file associated with the specified user to retrieve the two or more exchange permissions from the at least one user file,

identifying the one or more specific commodities within each of the two or more specific exchanges that the specified user is permitted to access based on the retrieved two or more exchange permissions, and

retrieving, from each of the two or more specific exchanges, one or more indications from among the plurality of indications in the indication database by searching the respective identified commodities among the one or more commodities in the indication database,

[(g2)] aggregate each retrieved indication from each of the two or more specific exchanges to form aggregated indications,

[(g3)] generate a presentation of the the [sic] aggregated indications retrieved from each of the two or more specific exchanges,

[(g4)] transmit the presentation to the user device over the communications link,

[(g5)] display, via the display on the user device, the presentation of the aggregated indications, and

[(g6)] automatically and continuously refresh and update the presentation displayed on the user device to reflect changes to the plurality of indications in real-time.

REJECTION

Claims 13–18, 37–39, 41, and 42 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

ANALYSIS

Appellant argues the pending claims as a group (Appeal Br. 6–23). We select independent claim 13 as representative. The remaining claims stand or fall with claim 13. *See* 37 C.F.R. §41.37(c)(1)(iv).

Under 35 U.S.C. § 101, an invention is patent eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice Corp.*, 573 U.S. at 217. The first step in that analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* If the claims are not directed to a patent-ineligible concept, e.g., an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered “individually and ‘as an ordered combination’” to determine whether there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 79, 78). This is “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 (alteration in original).

In rejecting the pending claims under 35 U.S.C. § 101, the Examiner determined that the claims are directed to “pool[ing] data from search results and display[ing] the collected and aggregated data to the user for trading commodities,” i.e., to an abstract idea similar to other concepts that the courts have held abstract (Final Act. 4). The Examiner also determined that the claims do not include additional elements that are sufficient to amount to significantly more than the abstract idea itself because the claims only require the use of generic computer components that perform generic computer functions (*id.* at 4–5).

After Appellant’s briefs were filed, and the Examiner’s Answer mailed, the U.S. Patent and Trademark Office (the “USPTO”) published revised guidance for use by USPTO personnel in evaluating subject matter eligibility under 35 U.S.C. § 101. 2019 REVISED PATENT SUBJECT MATTER ELIGIBILITY GUIDANCE, 84 Fed. Reg. 50, 57 (Jan. 7, 2019) (the “2019 Revised Guidance”). That guidance revised the USPTO’s examination procedure with respect to the first step of the *Mayo/Alice* framework by (1) “[p]roviding groupings of subject matter that [are] considered an abstract idea”; and (2) clarifying that a claim is not “directed to” a judicial exception if the judicial exception is integrated into a practical application of that exception. *Id.* at 50. The 2019 Revised Guidance, by its terms, applies to all

applications, and to all patents resulting from applications, filed before, on, or after January 7, 2019. *Id.*^{2 3}

Step One of the Mayo/Alice Framework (2019 Revised Guidance, Step 2A)

The first step in the *Mayo/Alice* framework, as mentioned above, is to determine whether the claims at issue are “directed to” a patent-ineligible concept, e.g., an abstract idea. *Alice Corp.*, 573 U.S. at 217. This first step, as set forth in the 2019 Revised Guidance (i.e., Step 2A), is a two-prong test; in Step 2A, Prong One, we look to whether the claim recites a judicial exception, e.g., one of the following three groupings of abstract ideas: (1) mathematical concepts; (2) certain methods of organizing human activity, e.g., fundamental economic principles or practices, commercial or legal interactions; and (3) mental processes. 2019 Revised Guidance, 84 Fed. Reg. at 54. If so, we next consider whether the claim includes additional elements, beyond the judicial exception, that “integrate the [judicial] exception into a practical application,” i.e., that apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the

² The 2019 Revised Guidance supersedes MANUAL OF PATENT EXAMINING PROCEDURE (“MPEP”) § 2106.04(II) and also supersedes all versions of the USPTO’s “Eligibility Quick Reference Sheet Identifying Abstract Ideas.” See 2019 Revised Guidance, 84 Fed. Reg. at 51 (“Eligibility-related guidance issued prior to the Ninth Edition, R-08.2017, of the MPEP (published Jan. 2018) should not be relied upon.”). Accordingly, Appellant’s arguments challenging the sufficiency of the Examiner’s rejection will not be addressed to the extent those arguments are based on superseded USPTO guidance.

³ The USPTO issued an update on October 17, 2019 (the “October 2019 Update: Subject Matter Eligibility,” available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf) clarifying the 2019 Revised Guidance in response to comments solicited from the public.

judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception (“Step 2A, Prong Two”). *Id.* at 54–55. Only if the claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application do we conclude that the claim is “directed to” the judicial exception, e.g., an abstract idea.

We are not persuaded, as an initial matter, by Appellant’s argument that the Examiner mischaracterized the concept to which claim 13 is directed or that the Examiner otherwise failed to consider the claim as a whole (Appeal Br. 18–21). The Examiner’s characterization of claim 13 is, in our view, fully consistent with the Specification, including the claim language. That the claim includes more words than the phrase the Examiner used to articulate the abstract idea, and that the Examiner, thus, articulates the abstract idea at a higher level of abstraction than would Appellant is an insufficient basis to persuasively argue that the claim language has been mischaracterized. *See Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240-41 (Fed. Cir. 2016) (“An abstract idea can generally be described at different levels of abstraction. As the Board has done, the claimed abstract idea could be described as generating menus on a computer, or generating a second menu from a first menu and sending the second menu to another location. It could be described in other ways, including, as indicated in the specification, taking orders from restaurant customers on a computer.”).

We also are not persuaded that the Examiner erred in determining that claim 13 is directed to an abstract idea. The Federal Circuit has explained that “the ‘directed to’ inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether ‘their character as a whole is directed to excluded subject matter.’” *Enfish, LLC v. Microsoft Corp.*,

822 F.3d 1327, 1335 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)). It asks whether the focus of the claims is on a specific improvement in relevant technology or on a process that itself qualifies as an “abstract idea” for which computers are invoked merely as a tool. *See id.* at 1335–36. Here, it is clear from the Specification (including the claim language) that the focus of claim 13 is on an abstract idea, and not on any improvement to technology or a technical field.

The Specification is entitled “SYSTEM FOR TRADING COMMODITIES AND THE LIKE,” and describes in the Background section that, as the commodities industry has evolved, “[t]here has been an increasing desire in the various commodities markets to move toward Internet-based systems” to take advantage of the “vast capabilities” of the Internet “in order to attract new clientele and to expedite and process transactions between parties” (Spec. ¶ 5). The Specification explains that “[c]urrently, OTC [over-the-counter] physicals and derivatives are traded dominantly via a phone based system” and that although regulated futures contracts have been trading via a “pit” and electronic “non-internet” basis, “the actual trading of the OTC physical and derivative commodities is generally left to brokers and traders using relatively traditional means of telephone, fax, and telex” (*id.*). The Specification describes that various industry entities, e.g., commodity traders and commodity brokers, have formed groups to study the use of the Internet as a tool to “pool order liquidity” and “streamline transactions and workflow”; however, according to the Specification, the formation of these groups presents a “major problem” inasmuch as “liquidity is . . . divided up or spread out amongst the

groups” (*id.*). The Specification, thus, describes that what is desired is a system for trading commodities in an Internet environment that enables various exchanges to create and share commodities within a unified database and that further permits member traders and brokers to post and view bids and offers and negotiate and consummate transactions on commodities from one or more exchanges in an integrated presentation that pools order liquidity from the various exchanges (*id.* ¶ 7).

The claimed invention is ostensibly intended to satisfy this desire by providing a system and method for trading commodities in which open bids and offers for commodities currently available for trading, i.e., indications, on at least two exchanges to which a particular user has access, are retrieved from a unified database and transmitted to the user for display on a user device (*see, e.g., id.* ¶ 55). Claim 13, thus, recites a system comprising, *inter alia*, one or more computers configured to: (1) retrieve, for a specified user, exchange permissions associated with the user and indications for one or more specific commodities within the exchanges that the user has permission to access, i.e.,

pool, for the specified user, indications among the plurality of indications submitted to the at least two computerized exchanges by:

querying the user database for the at least one user file associated with the specified user to retrieve the two or more exchange permissions from the at least one user file,

identifying the one or more specific commodities within each of the two or more specific exchanges that the specified user is permitted to access based on the retrieved two or more exchange permissions, and

retrieving, from each of the two or more specific exchanges, one or more indications from among the

plurality of indications in the indication database by searching the respective identified commodities among the one or more commodities in the indication database, [and]
aggregate each retrieved indication from each of the two or more specific exchanges to form aggregated indications (steps (g1) and (g2)); (2) “generate a presentation of the the [sic] aggregated indications retrieved from each of the two or more specific exchanges” (step (g3)); (3) “transmit the presentation to [a] user device over [a] communications link” (step (g4)); and (4) display the presentation on the user device, automatically and continuously updating the presentation to reflect changes to the subject indications, i.e., “display, via the display on the user device, the presentation of the aggregated indications” and “automatically and continuously refresh and update the presentation displayed on the user device to reflect changes to the plurality of indications in real-time” (steps (g5) and (g6)). These limitations, when given their broadest reasonable interpretation, recite (1) collecting information, i.e., open bids and offers for commodities available for trading, for a specified user; (2) formatting the information for presentation to the user; (3) transmitting the presentation to a user device; and (4) displaying the presentation on the user device.

Claim 13 recites that these steps are performed using one or more computers. Yet, the underlying processes recited in the claim are all acts that could be performed by a human, e.g., mentally or manually, using pen and paper, without the use of a computer or any other machine. Indeed, with the exception of the recited computer components, we find nothing in claim 13 that precludes these steps from being performed by a human. *Cf. Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318

(Fed. Cir. 2016) (where the claims were directed to a post office for receiving and redistributing email messages on a computer network, the court observed that “with the exception of generic computer-implemented steps, there is nothing in the claims themselves that foreclose[s] them from being performed by a human, mentally or with pen and paper”).

A person, for example, could read exchange permissions for a particular user, and indications, i.e., open bids and offers, for that user, from an existing database (*cf. CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) (noting that a limitation reciting obtaining information about transactions that have used an Internet address identified with a credit card transaction can be performed by a human who simply reads records of Internet credit card transactions from a pre-existing database)), and could format that information for presentation to the user either mentally or using pen and paper. Such a person also could present the collected information to the user via oral or written communication and similarly update the information via oral or written communication. *Cf. Clarilogic, Inc. v. FormFree Holdings Corp.*, 681 F. App’x 950 (Fed. Cir. 2018) (holding ineligible a claimed method for providing certified financial data indicating financial risk about an individual where a computer generated a report from the financial account data including real-time and historical transaction and balance data as directed to the abstract idea of collecting information, analyzing it, and displaying certain results of the collection and analysis).

Simply put, claim 13 recites a mental process, i.e., a concept performed in the human mind, including an evaluation or judgment, and therefore, an abstract idea. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52.

See also Elec. Power Grp., LLC v. Alstom, S.A., 830 F.3d 1350, 1355 (Fed. Cir. 2016) (explaining that “selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes”); *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015) (“Courts have examined claims that required the use of a computer and still found that the underlying, patent-ineligible invention could be performed via pen and paper or in a person’s mind.”).

Having concluded that claim 13 recites a judicial exception, i.e., an abstract idea (Step 2A, Prong One), we next consider whether the claim recites additional elements that integrate the judicial exception into a practical application (Step 2A, Prong Two).

The Examiner determined, and we agree, that the only elements recited in claim 13, beyond the abstract idea, are the claimed “one or more computers”; “user device”; “communications link”; “computerized exchanges” and indication and user databases — elements that, as the Examiner observes (Final Act. 5), are described in the Specification at a high level of generality, i.e., as generic computer components (*see, e.g.*, Spec. ¶ 52). We find no indication in the Specification, nor does Appellant direct us to any indication, that the operations recited in claim 13 invoke any assertedly inventive programming, require any specialized computer hardware or other inventive computer components, i.e., a particular machine, or that the claimed invention is implemented using other than generic computer components to perform generic computer functions. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014)

(“[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.”).

We also find no indication in the Specification that the claimed invention effects a transformation or reduction of a particular article to a different state or thing. Nor do we find anything of record, short of attorney argument, that attributes an improvement in computer functionality to the claimed invention or that otherwise indicates that the claimed invention integrates the abstract idea into a “practical application,” as that phrase is used in the 2019 Revised Guidance.⁴

Appellant argues that the claims are patent eligible because, similar to the claims in *Enfish*, the present claims are directed to “a specific improvement to the way computers operate, embodied in a system that provides for efficient (and improved) data storage and retrieval” (Appeal Br. 8). Yet, we find no parallel here between claim 13 and the claims in *Enfish* nor any comparable aspect in claim 13 that represents an improvement to computer functionality.

The Federal Circuit, in *Enfish*, rejected a § 101 challenge at the step one stage of the *Mayo/Alice* analysis because the claims at issue focused on “a specific type of data structure [i.e., a self-referential table for a computer database] designed to improve the way a computer stores and

⁴ The 2019 Revised Guidance references MPEP § 2106.05(a)–(c) and (e) in describing the considerations that are indicative that an additional element or combination of elements integrates the judicial exception, e.g., the abstract idea, into a practical application. 2019 Revised Guidance, 84 Fed. Reg. at 55. If the recited judicial exception is integrated into a practical application, as determined under one or more of these MPEP sections, the claim is not “directed to” the judicial exception.

retrieves data in memory.” *Enfish*, 822 F.3d at 1339. Based on the “plain focus of the claims,” the court, thus, held that the claims were directed to “a specific improvement to the way computers operate, embodied in the self-referential table,” and, as such, were more than a mere abstract idea. *Id.* at 1336.

Appellant argues here that, by organizing and storing the indications in the claimed indication database in an indexed manner according to commodity, and by using indexed user files, each associated with a specified user in the user database, the claimed invention allows faster and more efficient data retrieval, which results in higher throughput of data and information, as compared to prior art systems, and also provides an added level of security because the system only retrieves indications of the particular exchange(s) to which each user has been granted access (Appeal Br. 8–10; *see also id.* at 17–18). Appellant asserts that this is the type of “computer-technology improvement that constitutes a patentable innovation under § 101,” according to *Enfish* (*id.* at 9; *see also id.* at 18 (characterizing the increase in speed at which the aggregated presentation can be created as an improvement to the functioning of the computer itself)). But, we are not persuaded that the claimed invention represents an improvement in computer functionality, as contemplated by the Federal Circuit in *Enfish*.

The claimed self-referential table in *Enfish* was a specific type of data structure designed to improve the way a computer stores and retrieves data in memory. *Enfish*, 822 F.3d at 1339. Indeed, the Federal Circuit emphasized that the claims were not directed to any form of storing tabular data, but were instead directed to a *self-referential table* for a computer database. *Id.* at 1337. The court, thus, explained that the table stored

information related to each column in rows of the table, such that new columns could be added by simply creating new rows. *Id.* at 1338.

Appellant ostensibly maintains here that computer functionality is improved based on the use of indices for searching and retrieving data from the claimed indication and user databases. Yet, the present claims are not focused on how the use of these indices structurally alters the claimed database in a way that leads to an improvement in computer functionality, as in *Enfish*.

Rather than paralleling the claims in *Enfish*, the present claims, in our view, are analogous to those held patent ineligible in *Intellectual Ventures I v. Erie Indent. Co.*, 850 F.3d 1315 (Fed. Cir. 2017). There, where, as here, “the heart of the claimed invention lies in creating and using an index to search for and retrieve data,” the court concluded that “the claims . . . are directed to an abstract concept under *Alice*.” *Id.* at 1328; *see also id.* at 1327 (“Under step one [of the *Mayo/Alice* framework], we agree with the district court that the invention is drawn to the abstract idea of ‘creating an index and using that index to search for and retrieve data.’ This type of activity, i.e., organizing and accessing records through the creation of an index-searchable database, includes longstanding conduct that existed well before the advent of computers and the Internet.”).

Importantly here too, there is a fundamental difference between computer functionality improvements, on the one hand, and uses of existing computers as tools to perform a particular task, on the other — a distinction that the Federal Circuit, in fact, applied in *Enfish*, in rejecting the § 101 challenge because the claims at issue focused the self-referential table, i.e., a specific type of data structure, and not on asserted advances in uses to which

existing computer capabilities could be put. *See Enfish*, 822 F.3d at 1335–36. The alleged improvements in the speed and efficiency of data retrieval and the added level of security that Appellant touts do not concern an improvement to computer capabilities but instead relate to alleged improvements in collecting and displaying information and in controlling user access to particular information —processes in which a computer is used as a tool in its ordinary capacity.

We also are not persuaded by Appellant’s argument that the present claims are analogous to those at issue in *DDR Holdings* (Appeal Br. 13–15). The claims at issue in *DDR Holdings* were directed to retaining website visitors, and in particular to a system that modified the conventional web browsing experience by directing a user of a host website, who clicks an advertisement, to a “store within a store” on the host website, rather than to the advertiser’s third-party website. *DDR Holdings*, 773 F.3d at 1257–1258. The court determined that “the claims address a business challenge (retaining website visitors) [that] is a challenge particular to the Internet.” *Id.* at 1257. The court also determined that the invention was “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks,” and that the claimed invention did not simply use computers to serve a conventional business purpose. *Id.* Rather, there was a change to the routine, conventional functioning of Internet hyperlink protocol. *Id.*

Appellant argues here that rather than applying a known business practice from the pre-Internet world to computers or the Internet, the present claims, like those in *DDR Holdings*, address a problem that is particular to the Internet world (i.e., the inability to view indications for a specific

commodity across multiple computerized exchanges without launching multiple windows to view indications from different computerized exchanges) by modifying the system to include the claimed at least one computer and particularly arranged indications and user databases that enable an end user to view, and initiate transactions with, indications across multiple computerized exchanges in a single location (*id.*; *see also id.* at 17–18). Yet, unlike the situation in *DDR Holdings*, there is no indication here that the claimed computer components are used other than in their normal, expected, and routine manner for receiving, processing, transmitting, and displaying information. And “after *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.” *DDR Holdings*, 773 F.3d at 1256.

The court also expressly cautioned in *DDR Holdings* that “not all claims purporting to address Internet-centric challenges are eligible for patent.” *Id.* at 1258. Thus, in *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014), although the patentee argued that its claims were “directed to a specific method of advertising and content distribution that was previously unknown and never employed on the Internet before,” 772 F.3d at 714, the court found that this alone could not render its claims patent eligible where the claims merely recited the abstract idea of “offering media content in exchange for viewing an advertisement,” along with “routine additional steps such as updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and use of the Internet.” *Id.* at 715–716.

Similarly here, we find that the invocation of the Internet is not sufficient to transform Appellant’s otherwise patent-ineligible abstract idea

into patent-eligible subject matter. We find, as did the Examiner, that the claims pool data and display the aggregated data to a user. Narrowing that to online trading of commodities merely limits the use of the pooling and displaying to a particular technological environment, which the Court made clear in *Alice* is insufficient to transform an otherwise patent-ineligible concept into patent-eligible subject matter. *See Alice Corp.*, 573 U.S. at 222.

Appellant’s reliance on *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1302 (Fed. Cir. 2016) is similarly misplaced (Appeal Br. 15). There, the Federal Circuit held the claim was patent eligible because the claim entails an unconventional technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases). Although the solution requires generic components, the court determined that “the claim’s enhancing limitation necessarily requires that these generic components operate in an unconventional manner to achieve an improvement in computer functionality” and that the “enhancing limitation depends not only upon the invention’s distributed architecture, but also depends upon the network devices and gatherers — even though these may be generic — working together in a distributed manner.” *Amdocs*, 841 F.3d at 1300–01.

Appellant argues that, similar to the claims in *Amdocs*, the present claims provide “a technological solution (at least one computer component, an indication database and a user database and their cooperative functionality)” to “technological problems (i.e., inefficient data storage/retrieval, data security, limited access to data from one exchange at a time, limited data throughput, data inaccuracy, data usability, etc.)” (Appeal Br. 15). But, Appellant does not identify any “distributed architecture”

comparable to that in *Amdocs* or otherwise establish that the generic components recited in the claims operate in an unconventional manner.

Appellant's attempt to draw an analogy between the present claims and the patent-eligible claim in *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) also fails (Appeal Br. 16). In *McRO*, the Federal Circuit concluded that the claim, when considered as a whole, is directed to a "technological improvement over the existing, manual 3-D animation techniques" and uses "limited rules in a process specifically designed to achieve an improved technological result in conventional industry practice." *McRO*, 837 F.3d at 1316. Specifically, the Federal Circuit found that the claimed rules allow "computers to produce 'accurate and realistic lip synchronization and facial expressions in animated characters' that previously could only be produced by human animators"; and that the rules are "limiting in that they define morph weight sets as a function of the timing of phoneme sub-sequences." *Id.* at 1313 (citations omitted).

Unlike the claimed invention in *McRO* that improved how the physical display operated to produce better quality images, the claimed invention here merely uses generic computing components to collect and display information. It does not improve a display mechanism as was the case in *McRO*. See *SAP Am. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (distinguishing *McRO*).

Finally, we are not persuaded of Examiner error to the extent Appellant maintains that the claims are patent eligible because the claims do not preempt "all permissioning, data storage and retrieval systems/techniques" (Appeal Br. 16). Although the Supreme Court has

described “the concern that drives [the exclusion of abstract ideas from patent-eligible subject matter] as one of pre-emption,” *Alice Corp.*, 573 U.S. at 216, characterizing preemption as a driving concern for patent eligibility is not the same as characterizing preemption as the sole test for patent eligibility. “The Supreme Court has made clear that the principle of preemption is the basis for the judicial exceptions to patentability” and “[f]or this reason, questions on preemption are inherent in and resolved by the § 101 analysis.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice Corp.*, 573 U.S. at 216). “[P]reemption may signal patent ineligible subject matter, [but] the absence of complete preemption does not demonstrate patent eligibility.” *Id.*

We conclude, for the reasons outlined above, that claim 13 recites a mental process, i.e., an abstract idea, and that the additional elements recited in the claim are no more than generic computer components used as tools to perform the recited abstract idea. As such, they do not integrate the recited abstract idea into a practical application. *See Alice Corp.*, 573 U.S. at 223–24 (“[W]holly generic computer implementation is not generally the sort of ‘additional featur[e]’ that provides any ‘practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.’” (quoting *Mayo*, 566 U.S. at 77)). Accordingly, we agree with the Examiner that claim 13 is directed to an abstract idea.

Step Two of the Mayo/Alice Framework (2019 Revised Guidance, Step 2B)

Having determined under step one of the *Mayo/Alice* framework that claim 13 is directed to an abstract idea, we next consider under Step 2B of the 2019 Revised Guidance, the second step of the *Mayo/Alice* framework, whether claim 13 includes additional elements or a combination of elements

that provides an “inventive concept,” i.e., whether the additional elements amount to “significantly more” than the judicial exception itself.

2019 Revised Guidance, 84 Fed. Reg. at 56.

Appellant attempts to draw an analogy between the present claims and those in *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) (Appeal Br. 11–13). Yet, we can find no parallel between claim 13 and the claims at issue in *BASCOM*.

There, the Federal Circuit determined that the claims were directed to a technology-based solution to filter Internet content that overcame existing problems with other Internet filtering systems by taking a known filtering solution — i.e., a “one-size-fits-all” filter at an Internet Service Provider (“ISP”) — and making it more dynamic and efficient by providing individualized filtering at the ISP. *BASCOM*, 827 F.3d at 1351. The court, thus, held that the second step of the *Mayo/Alice* framework was satisfied because the claimed invention “represents a ‘software-based invention[] that improve[s] the performance of the computer system itself.’” *Id.*

Appellant argues that, similar to the inventive concept embodied in the claims of *BASCOM*, the ordered combination of claim elements here recites a particular implementation that improves the efficiency of the electronic exchanges and the overall system by offloading “redundant exchange permissioning and querying functions” from the electronic exchanges of the system (i.e., so that the exchanges do not have to perform these functions), and centralizing the functions in at least one computer component that is separate from the electronic exchanges (Appeal Br. 11–12). But, unlike the filtering system improvements in *BASCOM* that added significantly more to the abstract idea in that case, the claimed invention

here merely uses generic computing components to implement an abstract idea in the form of a mental process, or using pen and paper, i.e., pooling open bids and offers for commodities currently available for trading (indications) on at least two exchanges to which a particular user has access and displaying the aggregated data to the user.

Appellant also misapprehends the controlling precedent to the extent Appellant maintains that claim 13 includes additional elements or a combination of elements that is not well-understood, routine and conventional, because the claim is allegedly novel and/or non-obvious in view of the prior art (*id.* at 12). Neither a finding of novelty nor a non-obviousness determination automatically leads to the conclusion that the claimed subject matter is patent eligible. Although the second step in the *Mayo/Alice* framework is termed a search for an “inventive concept,” the analysis is not an evaluation of novelty or non-obviousness, but rather, a search for “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 Corp.*, 573 U.S. at 217–18 (citation omitted). “Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry.” *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013). A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent ineligible. *See Mayo*, 566 U.S. at 90; *see also Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (“The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.”).

The Examiner determined here, and we agree, that the only claim elements beyond the abstract idea are the claimed “one or more computers”; “user device”; “communications link”; “computerized exchanges” and indication and user databases, i.e., generic computer components used to perform generic computer functions (Final Act. 5) — a determination amply supported by, and fully consistent with the Specification (*see, e.g.*, Spec. ¶ 52).⁵ Appellant cannot reasonably contend, nor does Appellant, that there is a genuine issue of material fact regarding whether the operation of these components is well-understood, routine, or conventional, where, as here, there is nothing in the Specification to indicate that the operations recited in claim 13 require any specialized hardware or inventive computer components or that the claimed invention is implemented using other than generic computer components to perform generic computer functions, e.g., receiving, processing, transmitting, and displaying information. Indeed, the Federal Circuit, in accordance with *Alice*, has “repeatedly recognized the absence of a genuine dispute as to eligibility” where claims have been defended as involving an inventive concept based “merely on the idea of using existing computers or the Internet to carry out conventional processes,

⁵ The Office’s April 19, 2018 Memorandum to the Examining Corps from Deputy Commissioner for Patent Examination Policy, Robert W. Bahr, entitled, Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*), available at <https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF>, expressly directs that an examiner may support the position that an additional element (or combination of elements) is well-understood, routine or conventional with “[a] citation to an express statement in the specification . . . that demonstrates the well-understood, routine, conventional nature of the additional element(s)” (*id.* at 3).

with no alteration of computer functionality.” *Berkheimer v. HP, Inc.*, 890 F.3d 1369, 1373 (Fed. Cir. 2018) (Moore, J., concurring) (internal citations omitted); *see also BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1291 (Fed. Cir. 2018) (“BSG Tech does not argue that other, non-abstract features of the claimed inventions, alone or in combination, are not well-understood, routine and conventional database structures and activities. Accordingly, the district court did not err in determining that the asserted claims lack an inventive concept.”).

We are not persuaded, on the present record, that the Examiner erred in rejecting independent claim 13 under 35 U.S.C. § 101. Therefore, we sustain the Examiner’s rejection of claim 13, and claims 14–18, 37–39, 41, and 42, which fall with claim 13.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
13–18, 37–39, 41, 42	101	Eligibility	13–18, 37–39, 41, 42	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED