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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT R. FRIEDLANDER and JAMES R. KRAEMER

Appeal 2018-005008
Application 13/159,076
Technology Center 3600

Before JOSEPH A. FISCHETTI, NINA L. MEDLOCK, and
BRADLEY B. BAYAT, *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 1–10 and 12–21. 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 January 5, 2018) and Reply Brief (“Reply Br.,” filed April 4, 2018), and the Examiner’s Answer (“Ans.,” mailed February 7, 2018) and Final Office Action (“Final Act.,” mailed June 8, 2017). Appellant identifies the real party in interest as International Business Machines Corporation. Appeal Br. 2.

CLAIMED INVENTION

Appellant’s claimed invention “relates to . . . the use of computers in the field of medicine” and, more particularly, to “the use of computers in choosing proper medical treatment” (Spec. ¶ 1).

Claims 1, 15, and 18 are the independent claims on appeal. Claim 1, reproduced below with bracketed notations added, is illustrative of the claimed subject matter:

1. A method comprising:

[(a)] receiving, by a server, a current medical diagnosis of a medical condition being suffered by a current patient;

[(b)] identifying, by the server, a cohort for the current patient, wherein the cohort comprises persons who have been diagnosed with a same medical condition being suffered by the current patient;

[(c)] receiving, by the server and from a remote health care provider computer, desired results of the current patient and constraints for the current patient when treating the same medical condition being suffered by the current patient;

[(d)] identifying and retrieving, by the server, sets of past medical treatment procedures that were used to treat members of the cohort for the same medical condition being suffered by the current patient, wherein the sets of past medical treatment procedures are stored in a cohort medical treatment set database;

[(e)] comparing, by the server, past results and constraints for members of the cohort to the desired results and constraints for the current patient;

[(f)] sorting, by the server, the sets of past medical treatment procedures based on how closely the past results and constraints for members of the cohort match desired results of the current patient and constraints for the current patient based on past implementations of the sets of past medical treatment procedures to members of the cohort;

[(g)] transmitting, from the server to the remote health care provider computer via a network, a set of highest-ranked past medical treatment procedures from the sorted sets of past medical treatment procedures as a recommended course of treatment to a health care provider for the current patient, wherein the set of highest-ranked past medical treatment procedures best achieved the past results and constraints for members of the cohort as compared to other medical treatment procedures in the sets of past medical treatment procedures, and wherein the set of highest-ranked past medical treatment procedures are only a portion of the sorted sets of past medical treatment procedures in order to conserve network bandwidth in the network;

[(h)] transmitting, from the server to the remote health care provider computer, directions to display information about the set of highest-ranked past medical treatment procedures; and

[(i)] transmitting, from the server to the remote health care provider computer, directions to modify the displayed information about the set of highest-ranked past medical treatment procedures according to a profile of the health care provider for the current patient, wherein the profile of the health care provider for the current patient is an education level of the health care provider for the current patient.

REJECTIONS

Claims 1–10 and 12–21 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

Claims 1–10 and 12–21 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

ANALYSIS

Patent-Ineligible Subject Matter

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 independent claims 1, 15, and 18 are directed to an abstract idea analogous to the abstract idea in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016) inasmuch as the claims call for “collect[ing] information (patient diagnosis, cohort diagnosis, treatment sets, provider profile, results and constraints for the patient and cohort)”; analyz[ing the information] (identification of a cohort, identification of

treatment sets, comparison of results and constraints, sorting of treatment sets based on result/constraint matching”); and “display[ing] certain results (a recommended course of treatment, modified displayed information) of the collection and analysis” (Final Act. 4). The Examiner also determined that the independent claims do not include additional elements or a combination of elements sufficient to amount to significantly more than the judicial exception (*id.* at 5–6) and that the dependent claims are patent ineligible for reasons substantially similar to those set forth with respect to the independent claims (*id.* at 6).

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

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

Independent Claims 1, 15, and 18 and Dependent Claims 2–10, 12–14, 16, 17, 19, and 20

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

Appellant argues claims 1–10 and 12–20 as a group (Appeal Br. 10–17). We select independent claim 1 as representative. The remaining claims stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

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 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

(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 currently superseded USPTO guidance.

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 that the Examiner erred in determining that claim 1 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 claims focus on an abstract idea, and not on any improvement to technology and/or a technical field.

The Specification is entitled “COHORT DRIVEN SELECTION OF A COURSE OF MEDICAL TREATMENT,” and states that the disclosure relates, in particular, to “the use of computers in choosing proper medical treatment” (Spec. ¶ 1). The Specification describes, in the Background section, that selecting a medical treatment to administer to a patient is often an inexact science in that medical conditions are often treatable by different treatment plans, which may have varying levels of efficacy (*id.* ¶ 2). “If an administered set of treatments turns out to be ineffective for the patient’s malady, then time, money, and resources are wasted, and the patient may incur serious harm” (*id.*).

The claimed invention is ostensibly intended to provide an improved system and method for selecting an appropriate medical treatment. The Specification, thus, discloses that a current diagnosis of a medical condition being suffered by a patient is used to identify a cohort of other persons who have been diagnosed with the same medical condition; the medical treatment procedures previously administered to members of the cohort are sorted according to how closely the medical treatments match desired results and constraints for the current patient; and the sorted medical treatments are presented to a health care provider as a recommended course of treatment for the current patient (*id.* ¶ 3).

Consistent with this disclosure, claim 1 recites a method comprising: (1) receiving a current medical diagnosis of a medical condition for a current patient, and the patient's desired results and constraints, i.e., "receiving, by a server, a current medical diagnosis of a medical condition being suffered by a current patient" and "receiving, by the server and from a remote health care provider computer, desired results of the current patient and constraints for the current patient when treating the same medical condition being suffered by the current patient" (steps (a) and (c)); (2) identifying a cohort of other persons who have been diagnosed with the same medical condition and the medical treatment procedures previously administered to members of the cohort, i.e., "identifying, by the server, a cohort for the current patient, wherein the cohort comprises persons who have been diagnosed with a same medical condition being suffered by the current patient" and "identifying and retrieving, by the server, sets of past medical treatment procedures that were used to treat members of the cohort for the same medical condition being suffered by the current patient, wherein the sets of past medical

treatment procedures are stored in a cohort medical treatment set database” (steps (b) and (d)); (3) comparing the past results and constraints for members of the cohort to the desired results and constraints for the current patient and sorting the past medical treatment procedures based on how closely the past results and constraints for members of the cohort match the desired results and constraints for the current patient, i.e.,

comparing, by the server, past results and constraints for members of the cohort to the desired results and constraints for the current patient; [and]

sorting, by the server, the sets of past medical treatment procedures based on how closely the past results and constraints for members of the cohort match desired results of the current patient and constraints for the current patient based on past implementations of the sets of past medical treatment procedures to members of the cohort

(steps (e) and (f)); and (4) transmitting the highest ranked medical treatment procedures to a health care provider as a recommended course of treatment, i.e.,

transmitting, from the server to the remote health care provider computer via a network, a set of highest-ranked past medical treatment procedures from the sorted sets of past medical treatment procedures as a recommended course of treatment to a health care provider for the current patient, wherein the set of highest-ranked past medical treatment procedures best achieved the past results and constraints for members of the cohort as compared to other medical treatment procedures in the sets of past medical treatment procedures, and wherein the set of highest-ranked past medical treatment procedures are only a portion of the sorted sets of past medical treatment procedures in order to conserve network bandwidth in the network;

transmitting, from the server to the remote health care provider computer, directions to display information about the set of highest-ranked past medical treatment procedures; and

transmitting, from the server to the remote health care provider computer, directions to modify the displayed information about the set of highest-ranked past medical treatment procedures according to a profile of the health care provider for the current patient, wherein the profile of the health care provider for the current patient is an education level of the health care provider for the current patient.

(steps (g), (h), and (i)). These limitations, when given their broadest reasonable interpretation, recite identifying a recommended course of medical treatment for presentation to a health care provider by: (1) collecting information, i.e., a current medical diagnosis of a medical condition for a current patient, the desired results and constraints for the patient when treating the medical condition, and past medical treatment procedures that were used to treat other patients for the same medical condition; (2) analyzing the information, i.e., determining which of the past medical treatment procedures best matches the current patient's desired results and constraints; and (3) displaying the results of the collection and analysis, i.e., presenting the highest-ranked past medical treatment procedures to the health care provider as a recommended course of treatment. In other words, claim 1 recites a method of managing personal behavior or relationships or interactions between people, which is a method of organizing human activity and, therefore, an abstract idea. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52.

It is noteworthy here that the identification of a recommended course of treatment is implemented in claim 1 as a set of data gathering and manipulation steps, and that claims of similar character have been held to involve abstract ideas. *See, e.g., Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017) (identifying the abstract

idea of collecting, displaying, and manipulating data); *Elec. Power Grp.*, 830 F.3d at 1354 (characterizing collecting information, analyzing information by steps people go through in their minds, or by mathematical algorithms, and presenting the results of collecting and analyzing information, without more, as matters within the realm of abstract ideas); *see also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018) (“As many cases make clear, even if a process of collecting and analyzing information is ‘limited to particular content’ or a particular ‘source,’ that limitation does not make the collection and analysis other than abstract.”) (quoting *Elec. Power Grp.*, 830 F.3d at 1353, 1355 (citing cases))). Identifying the highest ranking past medical procedures by comparing the past results and constraints for members of the cohort to the desired results and constraints for the current patient also is substantially similar to other concepts that the courts have held abstract. *See, e.g., Berkheimer v. HP Inc.*, 881 F.3d 1360, 1366 (Fed. Cir. 2018) (concluding that parsing, comparing, storing, and editing data are abstract ideas); *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 F. App’x 950 (Fed. Cir. 2014) (comparing new and stored information and using rules to identify options is an abstract idea).

Having concluded that claim 1 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 only additional elements recited in claim 1, beyond the abstract idea, are a “server”; “cohort medical treatment set database”; “remote health care provider computer”; and a “network” — all of which are disclosed in

the Specification at a high degree of generality, i.e., as generic computer components (*see, e.g.*, Spec. ¶¶ 11–20). We find no indication in the Specification, nor does Appellant direct us to any indication, that the operations recited in claim 1 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 that attributes an improvement in computer technology and/or 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.³

Appellant attempts to draw an analogy between the pending claims and those at issue in *BASCOM Global Internet Services, Inc. v. AT&T*

³ 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.

Mobility LLC, 827 F.3d 1341 (Fed. Cir. 2016) (Appeal Br. 11–13). But we can find no parallel between claim 1 and the claims at issue in *BASCOM*.

In *BASCOM*, the Federal Circuit determined that the claimed installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user provided an inventive concept in that it gave the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server. *BASCOM*, 827 F.3d at 1350. 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.* at 1351 (alterations in original) (stating that like *DDR Holdings*, where the patent “claimed a technical solution to a problem unique to the Internet,” the patent in *BASCOM* claimed a “technology-based solution . . . to filter content on the Internet that overcomes existing problems with other Internet filtering systems . . . making it more dynamic and efficient”).

Appellant argues that the present invention “likewise provides a filtering tool” (Appeal Br. 11), and “just as in *BASCOM* . . . allows a remote client to filter content from a server . . . based on ‘desired results of the current patient and constraints for the current patient’ according to a [sic] ‘same medical condition’ being suffered by both the cohort and the current patient” (Appeal Br. 11–12). But, we are not persuaded that filtering medical treatments that were used on past patients based on how closely the past results and constraints match desired results and constraints for the current patient is a technological improvement comparable to the situation in *BASCOM*. Appellant also does not identify, and we do not find, any

improvement to computer technology analogous to the ordered combination described in *BASCOM* or any additional element or elements recited in claim 1 that yield an improvement in the functioning of a computer, or an improvement to another technology or technical field.

Appellant maintains that because the server returns only the highest ranked past medical treatment plans, “bandwidth of the network between the remote client and the server is conserved,” thereby providing an improvement in computer-related technology (Appeal Br. 12–13; *see also id.* at 13 (arguing that the present invention provides a new and useful method for reducing the network bandwidth requirements, and thus improving the operation, of a network, by limiting what is transmitted over the network), *id.* at 15 (further arguing that the present invention improves the computer-related technology of networks by conserving bandwidth of the network between the remote client and the server)). Yet, it could not be clearer from the Specification that the present invention is intended to identify a set of medical treatment procedures that is more likely to be effective in treating the medical condition being suffered by current patient (*see, e.g.,* Spec. ¶¶ 1–3). Considered in light of the Specification, the claimed invention, thus, appears to be focused on achieving a business objective, i.e., providing a recommended course of treatment to a health care provider, and not on any claimed means for achieving this goal that improves technology, e.g., conserves bandwidth.

Appellant directs our attention to Figure 4 and paragraph 43 of the Specification as ostensibly supporting its position (Appeal Br. 12–13). There, the Specification describes that the past medical treatment procedures are sorted based on how closely the past results and constraints for members

of the cohort match desired results and constraints for the current patient and that a set of highest-ranked past medical treatment procedures from the sorted sets of past medical treatment procedures is transmitted to the health care provider as a recommended course of treatment. Although less bandwidth may arguably be consumed in transmitting the highest-ranked past medical treatment procedures than would be consumed if the entire set of past medical treatment procedures was transmitted, we find no indication in the Specification that bandwidth conservation is a consideration in determining the size of the set of highest-ranked past medical treatment procedures, and, therefore, the volume of data, that will be transmitted to the health care provider.

Appellant's reliance on *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) is similarly misplaced. Ostensibly comparing the present invention to the claim held patent eligible in *McRO*, Appellant argues that the present invention provides

a “particular way to achieve a desired outcome” of improving the functionality of [a] network, [i.e., by limiting what is transmitted over the network to only a portion of the sorted sets of past medical treatment procedures in order to conserve network bandwidth,] and thus is more than “collecting and analyzing information”

(Appeal Br. 13; *see also* Reply Br. 6–7). Yet, the Federal Circuit premised its determination that the claim in *McRO* was patent eligible, not merely on the specificity of the claimed animation scheme, but on the fact that the claim, when considered as a whole, was directed to a technological improvement over existing, manual 3-D animation techniques, and used limited rules in a process specifically designed to achieve an improved

technological result in conventional industry practice. *See McRO*, 837 F.3d at 1316.

We are not persuaded that the claimed invention, as recited in claim 1, achieves a comparable improved technological result. To the contrary, as described above, the claimed invention, when considered in light of the Specification, clearly appears to be focused on achieving a commercial objective, i.e., providing a recommended course of treatment to a health care provider, and not on any claimed means for accomplishing that goal that improves technology.

Appellant further argues that claim 1 is analogous to patent-eligible claim 1 of Example 23 of the USPTO's "July 2015 Update Appendix 1: Examples"⁴ (Appeal Br. 15–16; *see also* Reply Br. 8–9). But, that argument is similarly unpersuasive of Examiner error.

⁴ Exemplary claim 1, which appears at page 8 of Appendix 1 of the July 2015 Update (available at <https://www.uspto.gov/sites/default/files/documents/ieg-july-2015-app1.pdf>), reads:

1. A computer-implemented method for dynamically relocating textual information within an underlying window displayed in a graphical user interface, the method comprising:
 - displaying a first window containing textual information in a first format within a graphical user interface on a computer screen;
 - displaying a second window within the graphical user interface;
 - constantly monitoring the boundaries of the first window and the second window to detect an overlap condition where the second window overlaps the first window such that the textual information in the first window is obscured from a user's view;
 - automatically relocating the textual information, by a processor, to an unobscured portion of the first window in a second format during an overlap condition so that the textual information is viewable on the computer screen by the user; and

Claim 1 of Example 23 is directed to a computer-implemented method for dynamically relocating information on a graphical user interface (“GUI”) if a window overlap condition exists. The July 2015 Update explains, at page 9 of Appendix 1, that claim 1 is patent eligible because it is not directed to an abstract idea (e.g., it “does not recite any mathematical concept or a mental process such as comparing or categorizing information”) but instead is “necessarily rooted in computer technology to overcome a problem [i.e., overlapping windows and obscured text in GUIs] specifically arising in graphical user interfaces.”

Appellant asserts that the present invention improves the operation of the GUI “by modifying the displayed information on a GUI, where the displayed information is ‘about the set of highest-ranked past medical treatments’” (Appeal Br. 16). Yet, in Example 23, the hypothetical invention detects when textual information of an underlying window is obscured, and reformats and moves the textual information to be viewable; in this way, the hypothetical invention overrides the routine and conventional way GUIs display information to improve readability (*see* July 2015 Update Appendix 1: Examples p. 7).

We find no indication in the Specification, nor does Appellant direct us to any indication that the claimed presentation of information, e.g., display of the set of highest-ranked past medical treatments, requires anything more than the generic functionality routinely present in generic

automatically returning the relocated textual information, by the processor, to the first format within the first window when the overlap condition no longer exists.

GUIs nor any indication that displaying data according to a profile of a user somehow improves the GUI.

We conclude, for the reasons outlined above, that claim 1 recites a method of organizing human activity, i.e., an abstract idea, and that the additional elements recited in the claim are no more than generic components used as tools to perform the recited abstract idea. As such, they do not integrate the 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.’”) (alterations in original) (quoting *Mayo*, 566 U.S. at 77). Accordingly, we agree with the Examiner that claim 1 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 1 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 1 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 notes that the Board, in its August 10, 2016 decision, “held that the presently claimed invention is novel based on its reversal of all 103 rejections for elements found in the present claims” (Appeal Br. 17). And Appellant asserts that the claimed features, therefore, amount to

significantly more than the judicial exception (*id.*). Appellant misapprehends the controlling precedent.

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. “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.”).

Further responding to the Examiner’s Answer, and paraphrasing the claim language, Appellant generally describes the various steps recited in claim 1 (Reply Br. 10). And Appellant argues that “the presently claimed invention is more than that which is ‘well-understood, routine and conventional in the field’, based on the combination of the multiple [claimed] steps” (*id.*). Yet, “the relevant inquiry is not whether the claimed invention as a whole is unconventional or non-routine.” *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). Instead, the

question is whether the claim includes additional elements, i.e., elements other than the abstract idea itself, that “transform the nature of the claim’ into a patent-eligible application.” *Alice Corp.*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 79, 78).

The Examiner determined here, and we agree, that the only claim elements beyond the abstract idea are a “server”; “cohort medical treatment set database”; “remote health care provider computer”; and a “network,” i.e., generic computer components used to perform generic computer functions (Final Act. 5–6) — a determination amply supported by, and fully consistent with, the Specification (*see, e.g.*, Spec. ¶¶ 11–20).⁵

Appellant cannot reasonably deny, nor does Appellant, that 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 1 require any specialized hardware or inventive computer components or that the claimed invention is implemented using anything other than generic computer components to perform generic computer functions, e.g., receiving, processing, and transmitting information. Indeed, the Federal Circuit, in accordance with *Alice*, has

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 not 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).

“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, with no alteration of computer functionality.” *Berkheimer v. HP, Inc.*, 890 F.3d 1369, 1373 (Fed. Cir. 2018) (Moore, J., concurring); *see also BSG Tech*, 899 F.3d at 1291 (“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 1 under 35 U.S.C. § 101. Therefore, we sustain the Examiner’s rejection of claim 1, and claims 2–10 and 12–20, which fall with claim 1.

Dependent Claim 21

Claim 21 depends from independent claim 1, and recites that the method of claim 1 further comprises:

further sorting, by the server, the set of highest-ranked past medical treatments into Tier One information and Tier Two information, wherein Tier One information has a higher level of detail than Tier Two information; and

transmitting, from the server to the remote health care provider computer via the network, the Tier Two information, wherein transmitting the Tier Two information consumes less network bandwidth in the network than transmitting the Tier One information.

Addressing claim 21, Appellant argues that network bandwidth is conserved using the claimed features, and that the Examiner’s rejection of claim 21 is

improper because the claimed invention improves the functionality of a computer system. Yet, it is clear from the Specification, and indeed from Appellant's own explanation (Appeal Br. 18), that forwarding Tier Two information is not primarily intended to conserve bandwidth (although it may have that effect), but rather to provide the health care provider with the level of information that he or she needs, based on his or her knowledge and experience (*see, e.g.*, Spec. ¶ 44). Thus, if required, based, e.g., on the health provider's education and/or experience level, the more detailed Tier One information will be transmitted without regard to its impact on network bandwidth and/or computer functionality.

We are not persuaded for the same reasons set forth above with respect to independent claim 1 that the Examiner erred in rejecting claim 21 under 35 U.S.C. § 101. Therefore, we sustain the Examiner's rejection.

Written Description

Whether a specification complies with the written description requirement of 35 U.S.C. § 112, first paragraph, is a question of fact and is assessed on a case-by-case basis. *See, e.g., Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000) (citing *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1561 (Fed. Cir. 1991)). The disclosure, as originally filed, need not literally describe the claimed subject matter (i.e., using the same terms or *in haec verba*) in order to satisfy the written description requirement. But the specification must convey with reasonable clarity to those skilled in the art that, as of the filing date, the inventors were in possession of the claimed invention. *See id.*

In rejecting independent claims 1, 15, and 18 under 35 U.S.C. § 112, first paragraph, the Examiner found that the Specification does not provide

written description support for “wherein the set of highest-ranked past medical treatment procedures are only a portion of the sorted sets of past medical treatment procedures in order to conserve network bandwidth in the network,” as recited in claim 1, and similarly recited in claims 15 and 18 (Final Act. 7). In this regard, the Examiner observed that the “as-filed description is silent with respect to transmission of the portion of data sets being performed ‘in order to conserve network bandwidth in the network’” and that “the term ‘bandwidth’ does not appear in the as-filed disclosure at all” (*id.*). The Examiner took a substantially similar position with respect to dependent claim 21, finding that the Specification lacks sufficient written description support for “wherein transmitting the Tier Two information consumes less network bandwidth in the network than transmitting the Tier One information” (*id.* at 8).

Appellant argues that a person of ordinary skill would understand from the Specification, as originally filed, including at least paragraphs 35, 43, and 44, that Appellant was in possession of the claimed invention, including the limitations to which the Examiner refers, at the time the present application was filed (Appeal Br. 7–10). However, those paragraphs only disclose that the server transmits, to the remote health care provider computer, via a network, a set of highest-ranked past medical treatment procedures, i.e., only a portion of the sorted sets of past medical treatment procedures (*see, e.g.,* Spec. ¶ 35), and that Tier Two Information may provide less detailed instructions as compared to the level of detail of Tier One Information (*see, e.g., id.* ¶¶ 43, 44). The Specification, as the Examiner observed, is silent with respect to only a portion of the data sets being transmitted in order to conserve network bandwidth (Final Act. 7), and

also silent with respect to the transmission of one type of information (Tier Two Information) consuming less bandwidth than the transmission of another type of information (Tier One Information) (*id.* at 8).

Appellant ostensibly maintains that the rejection is improper because “person skilled in the art would realize that sending a portion, rather than all, of the data will conserve network bandwidth,” i.e., that “it is well understood by a person skilled in the art that transmitting more data requires more bandwidth on a network, while transmitting less data requires less bandwidth on the network” (Appeal Br. 8). Yet, although “the [written] description requirement does not demand any particular form of disclosure, or that the specification recite the claimed invention *in haec verba*, a description that merely renders the invention obvious does not satisfy the requirement.” *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1352 (Fed. Cir. 2010) (citing *Lockwood v. Am. Airlines*, 107 F.3d 1565, 1571–72 (Fed. Cir. 1997)) (internal citation omitted). Instead, the supporting description must show possession of the claimed invention within the four corners of the disclosure. *Id.* at 1351.

Here, a person of ordinary skill in the art would not understand from the cited paragraphs that Appellant was in possession of the claimed invention at the time the present application was filed, including “wherein the set of highest-ranked past medical treatment procedures are only a portion of the sorted sets of past medical treatment procedures in order to conserve network bandwidth in the network,” as recited in independent claim 1, and similarly recited in independent claims 15 and 18, and “wherein transmitting the Tier Two information consumes less network bandwidth in the network than transmitting the Tier One information” as recited in

independent claim 21. Therefore, we sustain the Examiner's rejection of claims 1-10 and 12-21 under 35 U.S.C. § 112, first paragraph.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1-10, 12-21	101	Eligibility	1-10, 12-21	
1-10, 12-21	112, first paragraph	Written Description	1-10, 12-21	
Overall Outcome			1-10, 12-21	

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