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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MATTHEW OTTO and JOSEPH WEITEKAMP

Appeal 2018-007121
Application 13/022,420
Technology Center 3600

Before MURRIEL E. CRAWFORD, NINA L. MEDLOCK, and
TARA L. HUTCHINGS, *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 6 and 21–26. 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 March 6, 2018) and Reply Brief (“Reply Br.,” filed July 3, 2018), and the Examiner’s Answer (“Ans.,” mailed May 4, 2018), and Final Office Action (“Final Act.,” mailed May 4, 2017). Appellant identifies ITG SOFTWARE SOLUTIONS, INC. as the real party in interest (Appeal Br. 2).

CLAIMED INVENTION

The claimed invention “generally relates to systems and methods for providing electronic access to financial trading services” and, more particularly, to systems and methods for providing access to financial trading services via electronic networks “through the use of multiple service buses that can be individually configured to optimize access to financial trading services of diverse technical implementations without the need for bridging” (Spec. ¶ 1).

Claim 6, reproduced below with bracketed notations added, is the sole independent claim, and representative of the subject matter on appeal:

6. A computer-implemented method for providing access to financial trading services, comprising:

[(a)] identifying financial trading services that will be accessible to an end user, wherein the end user is associated with an interface component;

[(b)] determining performance requirements for each financial trading service, wherein the performance requirements relate to at least one of latency and reliability for each financial trading service;

[(c)] creating, by a computer, at least a first service bus and a second service bus, wherein the first service bus and the second service bus are both associated with the interface component, wherein the first and second service buses have performance characteristics related to at least one of latency and reliability, and wherein a performance characteristic of the first service bus differs from a performance characteristic of the second service bus;

[(d)] determining a first group of financial trading services that will be accessible via the first service bus and a second group of financial trading services will be accessible via the second service bus; and

[(e)] attaching, by the computer, the first group of financial trading services to the first service bus and the second group of financial trading services to the second service bus;

[(f)] wherein the step of determining which financial trading services will be accessible via the first service bus and which financial trading services will be accessible via the second service bus further includes:

assigning the financial trading services to the first and second service buses based at least in part on the performance requirements of each financial trading service and the performance characteristics of the first and second service buses.

REJECTION

Claims 6 and 21–26 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. 6–13). We select independent claim 6 as representative. The remaining claims stand or fall with claim 6. *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 independent claim 6 is directed to “providing access to financial services,” *i.e.*, to an abstract idea similar to other concepts that the courts have held abstract (Final Act. 2–5), and that the claim does not include additional elements sufficient to amount to significantly more than the abstract idea itself (*id.* at 5–7). The Examiner determined that dependent claims 21–26 are patent ineligible for substantially the same reasons (*id.* at 7–9).

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

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 now 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 public comments.

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 that exception into a practical application do we conclude that the claim is “directed to” the judicial exception, e.g., an abstract idea. *Id.*

We are not persuaded here by Appellant’s argument that the Examiner erred in determining that claim 6 is directed to an abstract idea (Appeal Br. 10–12). Claim 6, reproduced above, recites a method for providing access to financial trading services, comprising: (1) identifying financial trading services accessible to an end user and determining performance requirements for each financial trading service, i.e.,

identifying financial trading services that will be accessible to an end user, wherein the end user is associated with an interface component; [and]

determining performance requirements for each financial trading service, wherein the performance requirements relate to at least one of latency and reliability for each financial trading service

(limitations (a) and (b)); (2) creating at least a first service bus and a second service bus, having different performance characteristics related to latency and/or reliability, i.e.,

creating, by a computer, at least a first service bus and a second service bus, wherein the first service bus and the second service bus are both associated with the interface component, wherein the first and second service buses have performance characteristics related to at least one of latency and reliability, and wherein a performance characteristic of the first service bus differs from a performance characteristic of the second service bus

(limitation (c)); (3) determining a first group of financial trading services that will be accessible via the first service bus and a second group of financial trading services accessible via the second service bus, and assigning the financial services to the first and second service buses based on the performance requirements of the trading service and the performance characteristics of the service bus, i.e.,

determining a first group of financial trading services that will be accessible via the first service bus and a second group of financial trading services will be accessible via the second service bus;

wherein the step of determining which financial trading services will be accessible via the first service bus and which financial trading services will be accessible via the second service bus further includes:

assigning the financial trading services to the first and second service buses based at least in part on the performance requirements of each financial trading service and the performance characteristics of the first and second service buses

(limitations (d) and (f)); and (4) “attaching, by the computer, the first group of financial trading services to the first service bus and the second group of financial trading services to the second service bus” (limitation (e)).

We agree with the Examiner that these limitations, when given their broadest reasonable interpretation, recite providing access to financial services, i.e., a fundamental economic practice, which is a method of

organizing human activity and, therefore, an abstract idea. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52.

Having concluded that claim 6 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 6, beyond the abstract idea, are “a computer”; “a first service bus”; “a second service bus”; and “an interface component” — elements that, as the Examiner observes, “are recited at a high level of generality and recited as performing generic computer functions routinely used” (Final Act. 5). We find no indication in the Specification, nor does Appellant direct us to any indication, that the operations recited in claim 6 require any specialized computer hardware or other inventive computer components, i.e., a particular machine, invoke any allegedly inventive programming, 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 technology and/or a technical field 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 claim 6 is “technological in nature,” not abstract (Appeal Br. 10–12). And, citing paragraphs 6, 7, 10, and 12 of the Specification, Appellant asserts that the Specification “makes clear that the invention is an improvement in technology” (*id.* at 10), i.e., that “the claims result in a system that improves over the conventional SOA architecture by, *inter alia*, increasing reliability and latency” (*id.* at 11).

The difficulty with Appellant’s argument, as the Examiner observes and we agree, is that claim 6 does not “reflect the potential technological improvements over the prior art that are discussed” in Appellant’s Specification, i.e., providing access to financial trading services through the use of multiple service buses without the need for bridging (Ans. 13).

The Specification is titled “SYSTEMS AND METHODS FOR PROVIDING ACCESS TO FINANCIAL TRADING SERVICES,” and describes, in the Background section, that speed and reliability are of paramount importance in the financial trading services industry where a failure on the part of a provider to deliver trading services to its customers at acceptable levels of speed and/or reliability can result in significant financial losses (Spec. ¶ 2). The Specification describes that the financial industry has

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.

improved the speed and reliability of its networks through the use of proprietary messaging techniques and services, and that SOA is a way to organize distributed computing resources across enterprise systems (*id.* ¶ 3). The Specification describes in paragraph 6, on which Appellant relies, that SOA implementations typically employ a single common service bus, through which all available services are accessed; however, there are situations where at least one service is not accessible via the implemented service bus technology (*id.* ¶ 6). To accommodate these situations, an SOA may be implemented using multiple service buses (*id.* ¶ 7). But, according to the Specification, this multi-bus approach introduces additional latency into the system, and in sensitive applications (e.g., security trading systems), this additional latency can disrupt the system and lead to unacceptable outcomes, e.g., the additional latency could lead to situations where the information being acted on by trading clients is inaccurate (*id.* ¶ 10).

The Specification, describes that this deficiency in existing SOA systems is overcome “through the use of multiple service buses that can be individually configured to optimize access to financial trading services of diverse technical implementations without bridging” (*id.* ¶ 12). As such, it is clear from a fair reading of the Specification that the alleged improvement to SOA systems is achieved by providing a multi-bus system in which end users have access to service buses and available financial trading services, via interface components that communicate *directly* with the multiple service buses, i.e., there is no need for the service buses to be connected via a bridge (*see, e.g.,* Spec. ¶ 22)

Appellant argues here that “[t]he claims include numerous limitation[s] that provide for the technological improvements over the prior

art,” (e.g., “service buses are created to be associated with the interface component, [and] . . . have performance characteristics related to at least one of latency and reliability, and the performance characteristic of the first service bus and the second service bus are different” and “[s]ervices are attached to the first and second service buses based on the performance requirements of each service and the performance characteristics of the first and second service buses”) and that the claims, thus, “result in a system that improves over the conventional SOA architecture” (Appeal Br. 11).

Appellant, thus, maintains that “the claims . . . include limitations that are tied to the improvement and the words ‘without bridging’ are unnecessary” (Reply Br. 2).

Appellant notes that “it was common practice to allow a service consumer to access the multiple service buses via only one of the service buses by, for example, utilizing a bridge from that bus to other buses” — an arrangement that creates latency (*id.* at 3). And Appellant argues that “[t]he claimed invention solves the problem by providing direct access to multiple buses without the need to go through a single bus to a second bus, e.g., through a bridge” (*id.*).

Appellant posits that claim 6 “achieves this through the association of each bus with the interface component. Services then are attached to the buses based on the service’s characteristics” (*id.*). And Appellant asserts, “[a]s a result, services can be directly accessed from the proper bus” (*id.* (citing Spec., Fig. 2)).

Although claim 6 recites that “the first service bus and the second service bus are both associated with the interface component” and further recites “attaching . . . the first group of financial trading services to the first

service bus and the second group of financial trading services to the second service bus,” we agree with the Examiner that there is nothing in claim 6, when given its broadest reasonable interpretation, to require that the interface component communicate *directly* with the service buses — the feature that Appellant acknowledges provides the purported technological improvement (*see* Ans. 13 (“The current claim language, under a broadest reasonable interpretation, does not require the absence of a bridge, which is the feature that corresponds to the argued for improvement.”)).⁵

We conclude, for the reasons outlined above, that claim 6 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.’” (quoting *Mayo*, 566 U.S. at 77)). Accordingly, we agree with the Examiner that claim 6 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 6 is directed to an abstract idea, we next consider under Step 2B of the

⁵ During prosecution the USPTO gives claims their “broadest reasonable interpretation consistent with the specification.” *In re Hyatt*, 211 F.3d 1367, 1372 (Fed. Cir. 2000). Limitations appearing in the specification but not recited in the claim are, however, not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369 (Fed. Cir. 2003).

2019 Revised Guidance, the second step of the *Mayo/Alice* framework, whether claim 6 includes additional elements or a combination of elements that provides an “inventive concept,” i.e., whether an additional element or combination of elements adds specific limitations beyond the judicial exception that are not “well-understood, routine, conventional activity” in the field (which is indicative that an inventive concept is present) or simply appends well-understood, routine, conventional activities previously known to the industry to the judicial exception. 2019 Revised Guidance, 84 Fed. Reg. at 56.

Appellant argues that claim 6 includes “substantially more and, therefore, passes the second part of the *Alice* test” because the claim “includes numerous limitations that provide for the technological improvements over the prior art” (Appeal Br. 12). But, that argument is not persuasive for the reasons set forth above.

The Examiner determined here, and we agree, that the only claim elements beyond the abstract idea are “a computer”; “a first service bus”; “a second service bus”; and “an interface component,” i.e., generic computer components used to perform generic computer functions. Appellant cannot reasonably maintain, nor does Appellant, that there is insufficient factual support for the Examiner’s determination 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 6 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., determining, analyzing, and outputting 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, with no alteration of computer functionality.” *Berkheimer v. HP Inc.*, 890 F.3d 1369, 1373 (Fed. Cir. 2018) (Moore, J., concurring) (Moore, J., concurring) (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 6 under 35 U.S.C. § 101. Therefore, we sustain the Examiner’s rejection of claim 6, and claims 21–26, which fall with claim 6.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
6, 21–26	101	Eligibility	6, 21–26	

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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