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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TIMOTHY PHELAN and CHRISTINE SMYTH-BOYCE

Appeal 2018-007110
Application 10/112,208
Technology Center 3600

Before ELENI MANTIS MERCADER, NORMAN H. BEAMER, and GARTH D. BAER, *Administrative Patent Judges.*

MANTIS MERCADER, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1, 3–24, and 26–35. *See* Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as the assignee of this application, Goldman Sachs & Co. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The claims are directed to a method and system for processing queries requiring coordinated access to distributed databases. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A method of processing user queries to a system, the method comprising:
>
> receiving a user query in a predefined format via an electronic network, wherein the user query comprises a request for information;
>
> identifying, with a computer system, a plurality of types of data required to satisfy the user query by parsing the user query in accordance with the predefined format;
>
> determining whether the user query can be satisfied by searching a single data source from a plurality of data sources based on the identified types of data, each of the data sources containing information of at least one respective type; and
>
> in response to determining that more than one data source needs to be searched to satisfy the user query:
>
> generating, with the computer system, sub-queries by searching through query map structures with the identified types of data, wherein the query map structures include (i) a request key table that includes a list of defined requests and (ii) a data manager class information table that includes mappings of the defined requests to associated data sources in the plurality of data sources;
>
> identifying, with the computer system, types of requests in the request key table corresponding to attributes of the user query identified by the parsing of the user query;
>
> identifying, with the computer system, target data sources from the plurality of data sources by searching through the data manager class information table with the identified types of data and using the mappings in the data manager class information table between the identified types of requests in the request key table and classes of data manager objects called upon to retrieve data responsive to the types of requests;
>
> requesting data from the target data sources by issuing the sub-queries to the respective target data sources;

receiving responses from the respective target data sources for the issued sub-queries;

combining the received responses according to the identified types of data to generate a query response; and

returning the query response, via the electronic network, for display with one or more links for obtaining or modifying standing instructions associated with the requested information.

REFERENCE

The prior art relied upon by the Examiner is:

Name	Reference	Date
Kirk	US 5,768,578	June 16, 1998
Chau	US 2002/0156772 A1	Oct. 24, 2002

REJECTION

Claims 1, 3–24, and 26–35 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter, specifically an abstract idea.

Claims 1, 3–24, and 26–35 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Melchione in view of Kirk and further in view of Chau.

OPINION

Claims 1, 3–24, and 26–35 stand rejected under 35 U.S.C. § 101

Appellant argues that claim 1 is not directed to an abstract idea and refutes the cases cited by the Examiner as inapplicable and further argues that the focus of claim 1 is directed to an improvement in computer capability, namely the ability for a computer system to receive and process a user query directed to more than one data source by utilizing tables to

identify the target data sources and classes of data manager objects called upon to retrieve data responsive to types of requests. App. Br. 1–7.

Appellant further generally argues that the claims include various elements that show the claims are directed to significantly more than a patent upon any alleged abstract idea itself. App. Br. 7–8. These elements, according to Appellant, are significantly more than simply routine or fundamental functions and the recited claim elements are more than sufficient to show that the claims amount to significantly more than an attempt to patent something that is routine or fundamental. *Id.*

Appellant further argues that claim 1 is not trying to preempt others from practicing "processing user queries to a system." App. Br. 8.

We do not agree with Appellant's argument. An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo*, 566 U.S. at 75–77). In accordance with that framework, we first determine what concept the claim is "directed to." *See Alice*, 573 U.S. at 219 ("On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk.").

Concepts determined to be abstract ideas, and, thus, patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that "[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 176; *see also id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). Having said that, the Supreme Court also indicated that a claim "seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* (citing *Benson* and *Flook*); *see, e.g.*, *id*. at 187 ("It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.").

If the claim recites an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the

claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (internal citation omitted). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

The PTO recently published revised guidance on the application of § 101. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Memorandum"). Under that guidance, we first look to whether the claim recites:

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity, such as a fundamental economic practice, or mental processes); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* Manual of Patent Examining Procedure (MPEP) § 2106.05(a)–(c), (e)–(h) (9th Ed., Rev. 08–2017 (Jan. 2018)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

> (3) adds a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)); or

> (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Memorandum.

We agree with the Examiner that the claim is directed to an abstract idea, and we conclude that claim 1 recites organizing human activity such as a fundamental economic practice. Claim 1 recites, in pertinent part, data manipulations to process a user query and while the claim does not explicitly recite the type of query, when read in light of the Specification, the claim limitations pertain to a financial service provider processing customer queries regarding various financial transactions (*see* Spec. 4–6):

> receiving a user query in a predefined format . . ., wherein the user query comprises a request for information;
>
> identifying, . . ., a plurality of types of data required to satisfy the user query by parsing the user query in accordance with the predefined format;
>
> determining whether the user query can be satisfied by searching a single data source from a plurality of data sources based on the identified types of data, each of the data sources containing information of at least one respective type; and
>
> in response to determining that more than one data source needs to be searched to satisfy the user query:
>
> generating, . . . , sub-queries by searching through query map structures with the identified types of data, wherein the query map structures include (i) a request key table that includes a list of defined requests and (ii) a data manager class information table that includes mappings of the defined requests to associated data sources in the plurality of data sources;
>
> identifying, . . . , types of requests in the request key table corresponding to attributes of the user query identified by the parsing of the user query;
>
> identifying, with the computer system, target data sources from the plurality of data sources by searching through the data manager class information table with the identified types of data

> and using the mappings in the data manager class information table between the identified types of requests in the request key table and classes of data manager objects called upon to retrieve data responsive to the types of requests;
>
> requesting data from the target data sources by issuing the sub-queries to the respective target data sources;
>
> receiving responses from the respective target data sources for the issued sub-queries;
>
> combining the received responses according to the identified types of data to generate a query response; and
>
> returning the query response, . . . , . . . with one or more links for obtaining or modifying standing instructions associated with the requested information.

Accordingly, we agree with the Examiner (Ans. 3–4, and Final Act. 3) and conclude that claim 1, by reciting the above limitations, encompasses collecting information, analyzing it, and getting some results of the collection and analysis in response to a query regarding financial transactions—i.e., organizing human activity such as a fundamental economic practice.

If the claim recites an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (quoting *Mayo*, 566 U.S. at 72–73, 79). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

We agree with the Examiner's determination (*see* Final Act. 4–5) that the additional elements of the claim, including "an electronic network" and "a computer system" recited in claim 1, do not amount to "significantly more" than the abstract idea because they are generic computer devices and are merely being used for their intended purpose. These elements are all generic computer elements recited at a high level of generality and are merely invoked as tools to execute the data manipulation to answer a query. Appellant's Specification describes the network as "conventional based technology." Spec. 8–9. Thus we agree with the Examiner that nothing in the claims, understood in the light of the specification, requires anything other than an off-the-shelf conventional computer, along with network and display technology for gathering, sending and presenting the desired information. Ans. 4. Simply implementing the abstract idea on a generic computer or computer network is not a practical application of the abstract idea. *See* Memorandum, Step 2A, Prong Two.

Finally, we note that preemption is the concern that drives the exclusionary principle of judicial exceptions to patent-eligible subject matter. *Alice*, 134 S. Ct. at 2354. However, preemption is not a separate test of patent-eligibility, but is inherently addressed within the *Alice* framework. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) ("While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility."). Accordingly, Appellant's argument that claim 1 does not preempt an abstract idea (App. Br. 8), is not, by itself, persuasive of patent-eligibility.

Furthermore, as discussed with respect to Step 2A Prong Two, the additional element in the claim amounts to no more than mere data

manipulations to apply the exception using generic computers and networks. Thus, the same analysis applies here in 2B, i.e., mere data manipulations to apply an exception using generic computers and networks cannot integrate a judicial exception into a practical application at Step 2A or provide an inventive concept in Step 2B. Accordingly, the claim is ineligible. *See* Memorandum, Step 2B, Prong 2.

Accordingly, we affirm the Examiner's rejection of claims 1, 3–24 and 26–35 under 35 U.S.C. § 101.

Claims 1, 3–24, and 26–35 rejected under pre-AIA 35 U.S.C. § 103(a)

Appellant has not advanced any arguments regarding these rejections. Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). Accordingly we also sustain these rejections.

CONCLUSION

The Examiner's rejection is Affirm.

DECISION SUMMARY

Claims Rejected	**35 U.S.C. §**	**Reference(s)/Basis**	**Affirmed**	**Reversed**
1, 3–24, and 26-35	101		1, 3–24, and 26–35	
1, 3–24, and 26–35	103(a)	Melchione, Kirk, Chau	1, 3–24, and 26–35	
Overall Outcome:			1, 3–24, and 26–35	

TIME PERIOD FOR RESPONSE

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