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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* LAURE CANIS, CEDRIC FLORIMOND, SIMONE BISOGNI, and MARION BONNET[1]

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Appeal 2017-006105
Application 13/940,417
Technology Center 3600

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Before CARL W. WHITEHEAD JR., BETH Z. SHAW, and JOSEPH P. LENTIVECH, *Administrative Patent Judges*.

SHAW, *Administrative Patent Judge*.

DECISION ON APPEAL

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[1] Appellants identify the Real Party in Interest as Amadeus S.A.S. App. Br. 3.

Appellants appeal under 35 U.S.C. § 134(a) from a rejection of claims 1, 2, 4–7, 37, 40, and 42–47. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

The invention is for fraud screening for a transaction request. Spec. p. 1, ll. 9–10. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A fraud management system comprising:
>
> a server communicating with a terminal; and
>
> a computer-storage medium including a plurality of instructions that, when executed by the server, cause the server to:
>
> receive a plurality of transaction requests;
>
> sort the transaction requests into a plurality of groups;
>
> select a number of the transaction requests from each group to define a sample of the group that contains less than all the transaction requests in the group;
>
> for each transaction request in each sample:
>
> determine which rules of a plurality of rules are satisfied by the transaction request,
>
> select an acceptance flow from a plurality of acceptance flows based on the rules satisfied by the transaction request,
>
> calculate a total cost of fraud for the transaction request by applying the selected acceptance flow to the transaction request, and
>
> store the total cost of fraud in a total cost of fraud database;
>
> determine a total cost of fraud for each group based on the total costs of fraud calculated for the transaction requests in the sample of the group and stored in the total cost of fraud database; and
>
> monitor an efficiency of the fraud management system by computing a key performance indicator for each rule based on the total costs of fraud stored in the total cost of fraud

database and the value of transactions associated with the transaction requests to which the rule applied.

## REJECTION

The Examiner rejected the pending claims under 35 U.S.C. § 101. Non-Final Act. 2.

## CONTENTIONS AND ANALYSIS

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 Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). 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, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 192 (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 192 ("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 is "directed to" 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 (quotation marks 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. USPTO's January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance* ("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* MPEP § 2106.05(a)–(c), (e)–(h)).

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.

The Examiner concludes the pending claims are directed to receiving, sorting, determining, and monitoring information, an abstract idea that can be performed mentally. Ans. 3. The Examiner also concludes that the claims are similar to other concepts found abstract by courts, such as organizing information through mathematical correlations. *Id.*

The "select a number of the transaction requests from each group to define a sample of the group that contains less than all the transaction requests in the group," "select an acceptance flow from a plurality of acceptance flows based on the rules satisfied by the transaction request," and "determine a total cost of fraud for each group," steps, as drafted, under a broadest reasonable interpretation, cover performance of the limitations in the mind but for the recitation of generic computer components. That is, other than reciting "cause the server to," nothing in the claim element precludes this selecting and determining from practically being performed in the human mind. For example, but for the "cause the server to" language, the claim encompasses a user selecting certain transaction requests, determining which rules are satisfied, and selecting an acceptance flow, in his or her mind. Additionally, the mere nominal recitation of a generic server does not take the claim limitation out of the mental processes grouping. Thus, the claim recites a mental process, which is a judicial exception identified in the Memorandum, and thus an abstract idea.

We next determine if there are additional element(s) or a combination of elements in the claim that integrate the judicial exception into a practical application. *See* MPEP § 2106.05(a)–(c), (e)–(h); Memorandum.

Although each of the steps analyzed individually may be viewed as mere pre- or post-solution activity, the claim as a whole is directed to a

particular improvement in fraud management. The additional elements recite a specific manner of computing "a key performance indicator for each rule based on the total costs of fraud stored in a database" and a "value of transactions associated with transaction requests to which the rule applied." The collected data can then be used to "monitor the efficiency of a fraud management system," which provides a specific improvement over prior systems, resulting in improved fraud management. *See* Spec. 1:25–2:3; *see also* Memorandum § III A ("An additional element reflects an improvement in the functioning of a computer, or an improvement to other technology or technical field."). The claim as a whole integrates the mental process into a practical application.

Accordingly, we do not sustain the rejection of the pending claims under 35 U.S.C. § 101.

## DECISION

For the above reasons, the Examiner's rejection of claims 1, 2, 4–7, 37, 40, and 42–47 is reversed.

REVERSED