UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,016	08/27/2004	Fikret Ates	070457.2143	5428

125665   7590   03/04/2019

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ART UNIT	PAPER NUMBER
3696	

NOTIFICATION DATE	DELIVERY MODE
03/04/2019	ELECTRONIC

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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 FIKRET ATES

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Appeal 2018-001264
Application 10/506,016
Technology Center 3600

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Before CAROLYN D. THOMAS, JOSEPH P. LENTIVECH, and
SCOTT E. RAEVSKY, *Administrative Patent Judges*.

LENTIVECH, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the
Examiner's decision to reject claims 1–3, 6–9, 11–13, 16–19, 21, 22, 25, 26,
28, 29, 32, 33, and 35–38. Claims 4, 5, 10, 14, 15, 20, 23, 24, 27, 30, 31,
and 34 have been canceled. *See* App. Br. 25–35 (Claims Appendix). We
have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We reverse.

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[1] According to Appellant, the real party in interest is MasterCard
International Incorporated. App. Br. 2.

STATEMENT OF THE CASE

Appellant's Invention

Appellant's invention generally relates to "an authentication arrangement which is part of a payment system and a corresponding method executed over an open network such as the Internet using an Integrated Circuit Card." Spec. 1:6–8. Claim 1, which is illustrative, reads as follows:

1.   A network payment system for transacting a sale of merchandise over a network using an integrated circuit card for authentication, said network payment system comprising:

a merchant server in communication with said network, said merchant server having at least a first item of merchandise for sale;

a client terminal in communication with said network, said client terminal having an output device for reviewing said first item for sale, and an input device for initiating a purchase transaction to purchase said first item for sale, said client terminal being arranged to build a purchase message using information relating to a merchant identifier and financial transaction information obtained from said merchant server;

a card reader for communicating with said integrated circuit card,

a transaction approvals server for approving financial transactions,

said client terminal having a processor component configured to generate a challenge message, said challenge message being generated by compressing a concatenation of at least the merchant identifier and an account number,

the card reader having a processor component for receiving the challenge message and for generating a value from the challenge message, generation of said value based at least in part on said financial transaction information and the card reader further having a communication component for transmitting said value to said integrated circuit card;

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said integrated circuit card having a processor component for receiving the value and calculating a cryptographic message by encrypting at least a part of said value and for returning the cryptographic message to the card reader,

said integrated circuit card having a bitmap structure to identify bits of the cryptographic message;

the processor component of the card reader configured to generate an authentication token, based on the bitmap structure, from at least a part of the cryptographic message,

said client terminal having a communication component for transmitting at least part of the authentication token in a message for transmission via the network to said transaction approvals server, said message for transmission via the network to said transaction approvals server generated based at least in part on card verification results.

Rejection

Claims 1–3, 6–9, 11–13, 16–19, 21, 22, 24, 25, 26, 28, 29, 32, 33, and 35–38 stand rejected under 35 U.S.C. § 101 because the claimed subject matter is judicially-excepted from patent eligibility under § 101. Final Act. 2–4.

ANALYSIS

Rejection under 35 U.S.C. § 101

PRINCIPLES OF LAW

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. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (internal quotation marks and citation omitted).

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, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 184 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); 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 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 (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)).

Memorandum, 84 Fed. Reg. at 52, 54–55. 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.

Id. at 56.

OUR REVIEW

Applying the guidance set forth in the Memorandum, we conclude the Examiner has erred in rejecting the claims as being directed to patent-ineligible subject matter for the reasons that follow.

The Examiner finds, and we agree, that "the claims are directed towards network based financial transaction approvals for sale of merchandize and thus, the claims include an abstract idea." Final Act. 3; Ans. 3. Financial transaction approvals for sale of merchandize is similar to concepts found to be within the realm of abstract ideas such as verifying credit card transactions in CyberSource (see CyberSource Corp. v. Retail Decisions, Inc., 654 F.3d 1366, 1370 (Fed. Cir. 2011)), collecting and

analyzing information to detect and notify of misuses in *FairWarning* (*see FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016)), and guaranteeing transactions in *buySAFE* (*see buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1354 (Fed. Cir. 2014)). Accordingly, we conclude the claims recite a judicial exception of a fundamental economic practice—i.e., a method of organizing human activity.

Having determined that the claims recite a judicial exception, we now determine whether there are additional elements that integrate the judicial exception into a practical application. Memorandum, 84 Fed. Reg. at 54; *see also* MPEP § 2106.05(a)–(c), (e)–(h). Appellant's claims recites various computer-related limitations, including, for example, a "merchant server," a "network," a "client terminal," a "card reader," a "transactions approvals server," and an "integrated circuit card," as recited in claim 1. Although these computer-related limitations are not wholly generic in nature and are specific to network payment systems, they are described at a high level in the Specification without any meaningful detail about their structure or configuration. As such, we do not find the computer-related limitations are sufficient to integrate the judicial exception into a practical application.

However, the claims also recite additional limitations which focus on addressing problems arising in the context of a network payment system for transacting a sale of merchandise over a network using an integrated circuit card. These limitations, as recited in claim 1 for example, include: (1) "generat[ing] a challenge message . . . by compressing a concatenation of at least the merchant identifier and an account number," (2) "generating a value from the challenge message . . . based at least in part on said financial transaction information," (3) "calculating a cryptographic message by

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encrypting at least a part of said value," and (4) "generat[ing] an authentication token, based on the bitmap structure [included on the integrated circuit card], from at least a part of the cryptographic message."

We conclude that these limitations integrate the recited judicial exception into a practical application. In particular, these additional limitations apply or use the judicial exception in a meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See Diehr*, 450 U.S. at 184, 187; Memorandum, 84 Fed. Reg. at 55.

Because the claims as a whole integrate the recited judicial exception into a practical application, we find the claims are not directed to the judicial exception and, therefore, recite patent-eligible subject matter.[2]

Accordingly, we do not sustain the Examiner's rejection of claims 1–3, 6–9, 11–13, 16–19, 21, 22, 24, 25, 26, 28, 29, 32, 33, and 35–38 under 35 U.S.C. § 101.

DECISION

We reverse the Examiner's rejection of claims 1–3, 6–9, 11–13, 16–19, 21, 22, 24, 25, 26, 28, 29, 32, 33, and 35–38 under 35 U.S.C. § 101.

REVERSED

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[2] Because we have determined the claims are not directed to the recited judicial exception, we need not reach the question of whether the claims provide an inventive concept under the second step of the *Alice* analysis. Memorandum, 84 Fed. Reg. at 54.