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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte TARA CHAND SINGHAL

Appeal 2019-000707
Application 12/928,710
Technology Center 3600

Before ALLEN R. MacDONALD, NABEEL U. KHAN, and
MICHAEL J. ENGLE, *Administrative Patent Judges*.

KHAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant appeals from the Examiner's decision to reject claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

CLAIMED SUBJECT MATTER

According to Appellant, the invention relates to “facilitating private and secure merchant payment at a merchant sales terminal using a wireless mobile device of the customer.” Spec. 1:23–25.

Claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A secure payment system between a customer and a merchant using a sales terminal of the merchant and a central system on a global computer network, comprising:

a cellular wireless device of the customer, wherein the wireless device is equipped with a wireless data receiving sensor, wherein the wireless data receiving sensor is one or more from a group of, a digital camera, a short distance RF receiver and an infrared receiver, the wireless device using the wireless data receiving sensor is able to receive a partial payment authorization transaction record from the sales terminal of the merchant;

a logic stored in a memory of the wireless device and operating in a CPU of the wireless device receives and processes the partial payment authorization transaction record from the sales terminal, wherein the partial payment authorization transaction record meta data includes data fields of only a date and a time of the sales transaction, a transaction reference number, a merchant terminal identification and a payment amount;

the logic in the wireless device processes the partial payment authorization transaction record by first authenticating the device to the central system and then wirelessly transmitting the partial payment authorization transaction record over a cellular wireless communication network to the central system, thereby enable a payment transaction from the customer to the merchant.

REJECTIONS

Claims 1–20 stand rejected under 35 U.S.C. § 101 as directed to a judicial exception to patentable subject matter. Final Act. 3–5.

OPINION

Rejection under 35 U.S.C. § 101

Legal Principles

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 U.S. 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 Court’s two-part framework, described in *Mayo* and *Alice*. *Alice*, 573 U.S. 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, 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 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 187; *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 part 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.*

In January 2019, the U.S. Patent and Trademark Office (USPTO) published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“2019 Revised Guidance”).¹ “All USPTO personnel are, as a matter of internal agency management, expected to follow the guidance.” *Id.* at 51; *see also* October 2019 Update at 1.

Under the 2019 Revised Guidance and the October 2019 Update, 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) (“Step 2A, Prong One”); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018)) (“Step 2A, Prong Two”).²

2019 Revised Guidance, 84 Fed. Reg. at 52–55.

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

¹ In response to received public comments, the Office issued further guidance on October 17, 2019, clarifying the 2019 Revised Guidance. USPTO, *October 2019 Update: Subject Matter Eligibility* (the “October 2019 Update”) (available at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf).

² This evaluation is performed by (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception, and (b) evaluating those additional elements individually and in combination to determine whether the claim as a whole integrates the exception into a practical application. *See* 2019 Revised Guidance - Section III(A)(2), 84 Fed. Reg. 54–55.

(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.

2019 Revised Guidance, 84 Fed. Reg. at 52–56.

Prong One of Step 2A

Under prong one of step 2A, we first look to whether the claim recites any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activities, or mental processes). 2019 Revised Guidance, 84 Fed. Reg. at 52–54. To this end we note that claim 1 recites “[a] secure payment system between a customer and a merchant using a sales terminal of the merchant and a central system on a global computer network.” The Federal Circuit has held that processing of payments is a fundamental economic practice. *See Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378–79 (Fed. Cir. 2017); *see also CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366 (Fed. Cir. 2011) (holding a method and system for detecting fraud in a credit card transaction over the Internet to be patent ineligible). Claim 1 also recites

the logic in the wireless device processes the partial payment authorization transaction record by first authenticating the device to the central system and then wirelessly transmitting the partial payment authorization transaction record over a cellular wireless communication network to the central system, thereby enable a payment transaction from the customer to the merchant.

This step describes that the device is authenticated using the data gathered and the data is then transmitted over a cellular network to the central system to enable the payment transaction. Thus, this step further illustrates that the claim recites the fundamental economic practice of securely processing payments.

As explained above, we find the claim recites steps for securely processing payments and that processing payments is a fundamental economic practice. Fundamental economic practices fall in the category of certain methods of organizing human behavior, which the 2019 Revised Guidance recognizes as constituting an abstract idea. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52. Thus, under prong one of step 2A we determine the claims recite an abstract idea.

Appellant argues,

[t]he claimed subject matter is directed to commerce using a mobile device working in conjunction with a sales terminal of a merchant and servers on the global computer network, with specific structural elements, logic and interfaces. These claim elements do not equate to ‘a fundamental economic practice’, as that phrase is used and defined in Alice.

Appeal Br. 17. We disagree. As explained above payment processing has been found by our reviewing court to be a fundamental economic practice. The recited mobile device and global computer network will be analyzed further in the following steps of our analysis under the 2019 Revised Guidance.

Prong Two of Step 2A

Under prong 2 of step 2A of the 2019 Revised Guidance we determine whether the claim as whole integrates the recited abstract idea into a practical application of the abstract idea. A claim that integrates a judicial

exception into a practical application will 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. To evaluate whether the claims integrate the abstract idea into a practical application, we identify whether there are any additional elements recited beyond the abstract idea, and evaluate those additional elements individually and in combination.

Some exemplary considerations laid out by the Supreme Court and the Federal Circuit indicative that an additional element integrates an abstract idea into a practical application include (i) an improvement in the functioning of a computer or to another technological field, (ii) an application of the judicial exception with, or by use of, a particular machine, (iii) a transformation or reduction of a particular article to a different state or thing, or (iv) a use of the judicial exception in some other meaningful way beyond generally linking the use of the judicial exception to a particular technological environment. *See* MPEP § 2106.05(a)–(c), (e)–(h).

Appellant argues that the limitations of the claim are “not capable of being performed mentally using a pen and paper and are squarely directed to a digital machine.” Appeal Br. 17. Appellant argues that claim limitations are “not being performed mentally and are instead rooted in the technology of computer systems and specifically the technology of servers and mobile wireless devices and their interfaces over a global communication network.” Appeal Br. 17; *see also* Reply Br. 8–9 (“[T]he claimed subject matter is squarely directed to a security system that has its structure, a specific digital machine that of a mobile wireless device with unique logic operating in the digital machine and with unique interfaces to other systems.”)

Reviewing the claim limitations as a whole, we determine the claim does not recite additional elements that integrate the abstract idea into a practical application. In particular we find that the claim limitations do not improve the functioning of a computer or other technological field. Instead the technological elements of the claim simply link the fundamental economic practice to the technological environment of mobile devices, computers, and networks.

When considering whether claims are directed to an improvement in computer functionality, we “ask whether the focus of the claims is on the specific asserted improvement in computer capabilities ... or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016).

The limitations that we did not address above in prong one include “a cellular wireless device . . . equipped with a wireless data receiving sensor . . . able to receive a partial payment authorization transaction record from the sales terminal of the merchant.” This limitation recites the data gathering steps required to securely process payments. Data gathering steps “cannot make an otherwise nonstatutory claim statutory.” *CyberSource*, 654 F.3d at 1370 (quoting *In re Grams*, 888 F.2d 835, 840 (Fed. Cir. 1989)). Claim 1 further recites

a logic stored in a memory of the wireless device . . . receives and processes the partial payment authorization transaction record from the sales terminal, wherein the partial payment authorization transaction record meta data includes data fields of only a date and a time of the sales transaction, a transaction reference number, a merchant terminal identification and a payment amount.

This limitation describes the data gathered and identifies the specific fields of data gathered in order to process the payment.

The limitations Appellant calls to our attention include the “cellular wireless device,” the servers of the “central system,” and the interfaces over a “global computer network.” As specifically claimed, however, there is no indication that these elements or the technology underlying them is improved by the invention. Instead the recited elements are used to implement the secure payment processing system. For example, the claimed “cellular wireless device” is described in the Specification as “a cellular telephone with a screen and a keypad. Alternatively, it may be PDA with a wireless modem, which also has a display screen and a soft keypad.” Spec. 7:17–29. This description indicates that the claimed cellular wireless device is part of the technological environment in which the invention is implemented but does not indicate that the claimed cellular wireless device is improved by the invention. Similarly, the central system is described as including a storage device, operating system, system program, and system processor. Spec. 17:24–28. The global computer network is not described in detail but allows for communication between the mobile device and the central system. *See* Fig. 3, Spec. 15:17–20. The interface on the central system that connects to the global computer network is described as a “conventional internal or external modem[],” (Spec. 18:8–12) further illustrating that the network is not improved by the claimed invention. *Mortg. Grader, Inc. v. First Choice Loan Serv. Inc.*, 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (claims reciting an “interface,” “network,” and “database” were nevertheless directed to an abstract idea).

Accordingly, we do not find the claims integrate the abstract idea into a practical application.

Step 2B of the Guidance

Under step 2B of the 2019 Revised Guidance we analyze the claims to determine whether they provide an inventive concept (i.e., whether the additional elements amount to significantly more than the exception itself). Considerations that are evaluated with respect to step 2B include determining whether the claims as a whole add a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field.

Appellant argues the claimed “features and functions of a mobile wireless device with interfaces to sales terminals and servers on the global computer network are directed to privacy and security of customer bankcard data.” Appeal Br. 22. Appellant argues that “[a] very large number of sales transactions happen every day with merchants where the privacy and security of customer data is put at risk” and that “merchants have no effective and viable means to safeguard consumer private data being acquired by these sales terminals in the process of processing a payment for sales transaction via a bankcard.” Appeal Br. 22. Thus, Appellant argues, the claimed subject matter is non-routine and non-conventional. Appeal Br. 22.

We are unpersuaded by Appellant’s argument. First, analyzing the claim limitations individually and as an ordered combination, we note, as we did above, that the limitations beyond the abstract idea include the “cellular wireless device,” the servers of the “central system,” and the interfaces over a “global computer network.” As explained above, these claimed elements

appear to be used in their routine and conventional manner to implement the claimed secure payment processing system. Furthermore, to the extent Appellant is arguing that the claims are directed to an inventive concept because the merchants have not implemented such a system before, we note that although the second step in the *Alice/Mayo* 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*, 573 U.S. at 217–18. A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 566 U.S. at 90.

Accordingly, we sustain the Examiner’s rejection of claims 1–20 under 35 U.S.C. § 101.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–20	101	Eligibility	1–20	

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