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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANDREW PETROV, SCOTT GOLDTHWAITE,
and WILLIAM GRAYLIN

Appeal 2019-002531
Application 13/793,013
Technology Center 3600

Before HUNG H. BUI, ADAM J. PYONIN, and
DAVID J. CUTITTA II, *Administrative Patent Judges*.

CUTITTA, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1–7 and 9–24, all of the claims on appeal.² We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

We enter a new ground of rejection under 35 U.S.C. § 112, second paragraph.

¹ We use the word “Appellant” to refer to “[A]pplicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as VeriFone, Inc. Appeal Br. 2.

² Claim 8 is cancelled. Appeal Br. 15.

STATEMENT OF THE CASE

Invention

Appellant’s invention relates to “a secure transaction module that performs electronic transactions by interacting with payment cards or authentication cards.” *See* Spec. ¶ 4.³

Illustrative Claim

Claim 1, the sole independent claim, is illustrative of the claimed subject matter and is reproduced below with claim element labels added in brackets:

1. A secure electronic payment transaction system comprising:

[a] a secure transaction module (STM) for providing secure payment transactions utilizing banking cards, said STM comprising a smart card reader and a processor;

[b] a host device comprising a communication module for connecting to a financial institution via a network;

[c] wherein said STM further comprises an interface for communicating with said host device and with said financial institution, said STM communicating via a network connection with said financial institution by utilizing said communication module of said host device to connect to said network;

[d] wherein said interface provides a processor-to-processor connection between the STM and the host device;

³ Our Decision refers to: (1) Appellant’s Specification filed March 11, 2013 (“Spec.”); (2) the Non-Final Rejection mailed January 11, 2018 (“Non-Final Act.”); (3) the Appeal Brief filed June 7, 2018 (“Appeal Br.”); (4) the Examiner’s Answer mailed December 12, 2018 (“Ans.”); and (5) the Reply Brief filed February 11, 2019 (“Reply Br.”).

[e] wherein said STM receives payment transaction commands issued by said host device from said host device via said interface; and

[f] wherein said STM is operative to process sensitive information within a cryptographic boundary before said sensitive information is transmitted to said financial institution via said host device such that said sensitive information is transmitted without said sensitive information being compromised by said host device.

Appeal Br. 14 (Claims Appendix).

REJECTION

The Examiner rejects claims 1–7 and 9–24 under 35 U.S.C. § 101 as reciting patent-ineligible subject matter. Non-Final Act. 3–8.

DISCUSSION

We review the appealed rejection for error based upon the issues identified by Appellant and in light of Appellant’s arguments and evidence. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential). Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv) (2017).

I. 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 US 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. *See, e.g., Alice Corp. Pty. Ltd. 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-step framework, described in *Alice* and *Mayo*. *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 217.

If the claim recites an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, in which “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 Office published revised guidance on the application of § 101. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (hereinafter “Guidance”). Recently, the USPTO published an update to that guidance. *October 2019 Patent Eligibility Guidance Update*, 84 Fed. Reg. 55,942 (hereinafter “Guidance Update”). Under the Guidance and the Guidance Update, in determining whether a claim falls within an excluded category, we first look to whether the claim recites:

- (1) Step 2A — Prong One: 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) Step 2A — Prong Two: additional elements that integrate the judicial exception into a practical application (*see* MPEP⁴ § 2106.05(a)–(c), (e)–(h)).

See Guidance, 84 Fed. Reg. 54–55 (“Revised Step 2A”). 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 (Step 2B):

(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 id. at 56 (“*Step 2B*”).

II. Analysis

Step 2A, Prong 1 in the Guidance (Judicial Exceptions)

The Examiner determines the claims are directed toward the abstract idea of “facilitating financial transaction[s].” Non-Final Act. 5.

Appellant argues the Examiner erred in determining the claim is directed to an abstract concept because the Examiner does not identify the category of abstract idea to which the claims belong and because “[t]he pending claims do not recite any of the judicial exceptions enumerated in the 2019 PEG” including certain methods of organizing human activity, mental processes, or mathematical concepts. Reply Br. 2–5; Appeal Br. 6–7.

Pursuant to the Guidance, we are persuaded of Examiner error in the rejection. Examples of certain methods of organizing human activity are enumerated in the Guidance to include “fundamental economic principles or

⁴ All Manual of Patent Examining Procedure (“MPEP”) citations herein are to MPEP, Rev. 08.2017, January 2018.

practices . . . commercial or legal interactions . . . managing personal behavior or relationships or interactions between people.” Guidance, 84 Fed. Reg. 52, Section I (Groupings of Abstract Ideas). Further, the Guidance describes mental concepts as “concepts performed in the human mind (including an observation, evaluation, judgment, opinion)” and mathematical concepts as “mathematical relationships, mathematical formulas or equations, mathematical calculations.” *Id.*

Claim 1 recites limitations such as [a] “a secure transaction module (STM) for providing secure payment transactions utilizing banking cards, said STM comprising a smart card reader and a processor,” [b] “a host device comprising a communication module for connecting to a financial institution via a network,” and [f] “wherein said STM is operative to process sensitive information within a cryptographic boundary before said sensitive information is transmitted to said financial institution via said host device such that said sensitive information is transmitted without said sensitive information being compromised by said host device.” Appeal Br. 14.

The Examiner has not sufficiently demonstrated that these limitations are consistent with certain methods of organizing human activity, mental processes, or mathematical concepts, pursuant to the eligibility analysis as enumerated in the Guidance. Guidance, 84 Fed. Reg. 54, Section III(A)(1) (Prong One: Evaluate Whether the Claim Recites a Judicial Exception).

For these reasons, we are persuaded claim 1 has not been shown to “recite a judicial exception within the enumerated groupings of abstract ideas in the Guidance and thus “the claim is eligible at Prong One of revised Step 2A.” Guidance, 84 Fed. Reg. 53, Section III (Instructions for Applying

Revised Step 2A During Examination). Accordingly, we do not sustain the Examiner's rejection of claims 1–7 and 9–24 under 35 U.S.C. § 101.

NEW GROUND OF REJECTION

Pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a new ground of rejection under 35 U.S.C. § 112, second paragraph. Independent claim 1 recites “wherein said STM is operative to process sensitive information within a *cryptographic boundary* before said sensitive information is transmitted to said financial institution via said host device such that said sensitive information is transmitted *without said sensitive information being compromised by said host device.*” Appeal Br. 14 (emphasis added).

This limitation, as recited in claim 1, is indefinite. In describing the cryptographic boundary, Appellant's Specification states:

The STM 100 has the unique ability to have its own “cryptographic boundary” so that secure payment and other transactions are not compromised by the host device 200. This “cryptographic boundary” includes security measures that detect and prevent tampering with the hardware and software components of the STM that are used for transaction processing. All sensitive information that is processed within this “cryptographic boundary” is encrypted before it is exposed to the host device. Furthermore, the STM maintains this “cryptographic boundary” between different transaction applications that are contained within its memory, thereby allowing multiple authorities to house approved and secure transactions processing methodologies.

Spec. 10:10–20.

If the language of the claim is such that a person of ordinary skill in the art could not have interpreted the metes and bounds of the claim so as to understand how to avoid infringement, a rejection of the claim under 35

U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph, is appropriate. *See Morton Int'l, Inc. v. Cardinal Chem. Co.*, 5 F.3d 1464, 1470 (Fed. Cir. 1993).

Appellant's claim 1 recites that the "STM is operative to process sensitive information within a cryptographic boundary . . . such that said sensitive information is transmitted without said sensitive information being compromised by said host device." Appeal Br. 14. The Specification similarly discloses that "The STM 100 has the unique ability to have its own "cryptographic boundary" so that secure payment and other transactions are not compromised by the host device 200." Spec. 10:12-14. However, neither the Specification nor the claim clarifies what it means for secure payments and other transactions to be transmitted *without being compromised*. Without such a disclosure, an accused infringer would be unable to determine whether a particular encrypted STM transmits *uncompromised* sensitive information, thereby infringing the claim. Thus, the "cryptographic boundary," as recited in claim 1, is indefinite because there is no means to determine the metes and bounds of the limitation. Accordingly, we enter a NEW GROUND OF REJECTION for claim 1 under 35 U.S.C. § 112, second paragraph, as indefinite. Claims 2-7 and 9-24 depend from claim 1 and are rejected for similar reasoning.

CONCLUSION

We reverse the Examiner’s decision to reject claims 1–7 and 9–24 under 35 U.S.C. § 101.

Pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a new ground of rejection for claims 1–7 and 9–24 under 35 U.S.C. § 112, second paragraph.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed	New Ground
1–7, 9–24	101	Eligibility		1–7, 9–24	
	112, 2 nd par.	Indefiniteness			1–7, 9–24
Overall Outcome				1–7, 9–24	1–7, 9–24

TIME PERIOD FOR RESPONSE

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that the Appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of

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the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. . . .

(2) *Request rehearing.* Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. . . .

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure § 1214.01.

REVERSED
37 C.F.R. § 41.50(b)