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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* MARK WIESMAN and MAURICE DAVID LISCIA

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Appeal 2018-005328  
Application 12/343,837  
Technology Center 3600

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Before JASON V. MORGAN, DANIEL N. FISHMAN, and  
ADAM J. PYONIN, *Administrative Patent Judges*.

MORGAN, *Administrative Patent Judge*.

DECISION ON APPEAL  
STATEMENT OF THE CASE

*Introduction*

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 1, 3–9, 11–16, 18–24, and 26. Claims 2, 10, 17, and 25 are canceled. Final Act. 2. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> 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 MasterCard International Incorporated. Appeal Br. 1.

*Summary of the disclosure*

Appellant discloses an “interchange computer system . . . configured to authenticate an identity of a user of a transaction card as a legitimate cardholder” by “generat[ing] an authentication message in response to [a] registration request, transmit[ing] the authentication message to an issuer of the transaction card wherein the issuer provides the authentication message to the user, and receiv[ing] the authentication message from the user.”

Abstract.

*Exemplary claim (key limitations emphasized)*

1. A method implemented by a payment card network server computer for authenticating an identity of a user of a transaction card as being a legitimate cardholder, the user initiating a registration process to register the transaction card with a program offered by the payment card network, the payment card network server computer communicatively coupled to a memory, said method comprising:

receiving a registration request message from a user computing device, the registration request message including a program identifier identifying the program;

generating, in response to the registration request message, an authentication message including one or more characters authenticating the user as the legitimate cardholder;

generating a transaction data message that includes the authentication message and the program identifier, the transaction data message formatted for transmission over the payment card network;

storing the authentication message within the memory;

*transmitting, by the payment card network server computer, the transaction data message to an issuing bank computing device associated with an issuing bank via the payment card network, the issuing bank having issued the transaction card to the legitimate cardholder, the issuing bank computing device being*

*separate from the payment card network server computer, wherein the issuing bank electronically inserts the program identifier and the authentication message from the transaction data message into a billing record of the transaction card;*

displaying, by the payment card network server computer, a prompt on the user computing device to provide the authentication message to the payment card network server computer for completing the registration request, wherein the prompt instructs the user to gain electronic access to the billing record that includes the authentication message by satisfying at least one digital security measure of the issuing bank computing device for gaining access;

receiving an inputted authentication message from the user computing device;

comparing the inputted authentication message with the stored authentication message;

authenticating the user based on a match between the inputted authentication message and the stored authentication message;  
and

completing the registration process for the user with the program offered by the payment card network.

*The Examiner's rejections and cited references*

The Examiner rejects claims 1, 3–9, 11–16, 18–24, and 26 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 3–7.

The Examiner rejects claims 1, 3–9, 11–16, 18–24, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Weller et al. (US 2008/0301056 A1; published Dec. 4, 2008) (“Weller”) and Walker et al. (US 2002/0169664 A1; published Nov. 14, 2002) (“Walker”). Final Act. 7–12.

The Examiner alternatively<sup>2</sup> rejects claims 1, 3–9, 11–16, 18–24, and 26 under 35 U.S.C. § 103(a) as being unpatentable over Weller and Rolf et al. (US 2007/0219871 A1; published Sept. 20, 2007) (“Rolf”). Final Act. 12–17.

### PRINCIPLES OF LAW

To be statutorily patentable, the subject matter of an invention must be a “new and useful process, machine, manufacture, or composition of matter, or [a] new and useful improvement thereof.” 35 U.S.C. § 101. There are implicit exceptions to the categories of patentable subject matter identified in 35 U.S.C. § 101, including: (1) laws of nature; (2) natural phenomena; and (3) abstract ideas. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014). The Supreme Court has set forth a framework for distinguishing patents with claims directed to these implicit exceptions “from those that claim patent-eligible applications of those concepts.” *Id.* at 217 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012)). The evaluation follows a two-part analysis: (1) determine whether the claim is *directed to* a patent-ineligible concept, e.g., an abstract idea; and (2) if so, then determine whether any element, or combination of elements, in the claim is sufficient to ensure that the claim amounts to *significantly more* than the patent-ineligible concept itself. *See id.* at 217–18.

“[A]ll inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S.

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<sup>2</sup> We note the Manual of Patent Examining Procedure provides that “the [E]xaminer should . . . avoid an unnecessary number of rejections over similar references. . . . [m]ultiplying references, any one of which is as good as, but no better than, the others, adds to the burden and cost of prosecution and should therefore be avoided.” MPEP § 904.03.

at 71. We “‘must be careful to avoid oversimplifying the claims’ by looking at them generally and failing to account for the specific requirements of the claims.” *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016) (quoting *In re TLI Commc’ns LLC Patent Litigation*, 823 F.3d 607, 611 (Fed. Cir. 2016)).

The U.S. Patent and Trademark Office (USPTO) recently revised the guidance on the application of the two-part analysis. *See, e.g.*, USPTO, 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (January 7, 2019) (“Revised Guidance”); *see also* USPTO, October 2019 Update: Subject Matter Eligibility, available at [https://www.uspto.gov/sites/default/files/documents/peg\\_oct\\_2019\\_update.pdf](https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf) (Oct. 17, 2019) (“Oct. 2019 Guidance”). Under the Revised 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) (*see id.* at 54 (step 2A, prong one)); and

(2) additional elements that integrate the judicial exception into a practical application (*see id.* at 54–55 (step 2A, prong two); MPEP §§ 2106.05(a)–(c), (e)–(h)).

*See* 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 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* Revised Guidance, 84 Fed. Reg. at 56.

35 U.S.C. § 101

*Revised Guidance step 2A, prong one*

In rejecting claim 1 as being directed to patent-ineligible subject matter, the Examiner determines the claim is “directed to the abstract idea(s) of authenticating an identity of a user of a transaction card as being a legitimate cardholder, the user initiating a registration process to register the transaction card with a program offered by the payment card network.” Final Act. 3; *see also* Ans. 3–4. In particular, the Examiner determines the recitations of claim 1 recite concepts analogous to “using categories to organize, store, and transmit information,” “to the basic concept of data recognition and storage,” “to the basic concepts of comparing new and stored information using rules to identify options,” and to “organizing human activity,” to “fraud detection,” and “to advertising.” Ans. 5–6 (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat. Ass’n*, 776 F.3d 1343 (Fed. Cir. 2014); *Alice*, 573 U.S. 208; *Planet Bingo, LLC v. VKGS LLC*, 576 F. App’x 1005 (Fed. Cir. 2014); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014)).

Appellant contends the Examiner erred by relying solely on preamble recitations in characterizing claim 1. Appeal Br. 9; *see also* Reply Br. 2–3. The Examiner, however, considers the recitations in the body of claim 1 rather than relying solely on its preamble. *See* Ans. 5–6. Appellant’s remaining arguments are best considered under step 2A, prong two, or step 2B of the Revised Guidance.

Based on the record before us, we agree with the Examiner that claim 1 recites an abstract idea. Specifically, claim 1 recites “receiving a registration request message,” generating, transmitting, and storing “a transaction data message that includes [a generated] authentication message,” and authenticating a user based on a match between a received inputted authentication message and the stored authentication message. Thus, claim 1 recites a dynamic knowledge-based authentication process—a process for fraud prevention—similar to static knowledge-based authentication processes such as asking for information such as “what is your mother’s maiden name?” Unlike with static knowledge-based authentication processes—which rely on existing information with supposedly limited distribution—the claimed dynamic knowledge-based authentication uses information generated and transmitted to the user through what is believed to be a trusted channel (i.e., through an issuing bank’s billing records).

Whether static or dynamic, knowledge-based authentication is a form of fraud detection. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1094 (Fed. Cir. 2016). Rather than “collecting and analyzing information to detect misuse” or unauthorized use of resources (*id.*), knowledge-based authentication collects and analyzes information to

ascertain that use of resources is authorized. Nonetheless, knowledge-based authentication processes such as those recited control access to resources in a manner that represents a certain method of organizing human activity (e.g., enforcing a degree of ownership and control over a resource, which represents a fundamental economic practice). *See, e.g., Prism Techs. LLC v. T-Mobile USA, Inc.*, 696 F. App'x 1014, 1017 (Fed. Cir. 2017) (citing *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 613 (Fed. Cir. 2016); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1367 (Fed. Cir. 2015)); *Innovation Scis., LLC v. Amazon.com, Inc.*, 778 F. App'x 859, 863 (Fed. Cir. 2019) (“the abstract idea of securely processing a credit card transaction with a payment server”).

Knowledge-based authentication also represents the detection of “fraud by obtaining and comparing intangible data pertinent to business risks.” *Subject Matter Eligibility Examples: Business Methods*, 7–8, available at <https://www.uspto.gov/sites/default/files/documents/ieg-bus-meth-exs-dec2016.pdf> (Dec. 15, 2016) (a hypothetical “method of fraud prevention by verifying the authenticity of the customer’s identity prior to proceeding with a banking transaction” represents “an abstract mental process”). We note, in particular, that claims recite mental processes if “they contain limitations that can practically be performed in the human mind, including for example, observations, evaluations, judgments, and opinions” (Oct. 2019 Guidance 7), “even if they are claimed as being performed on a computer” (*id.* at 8). *See also Gottschalk v. Benson*, 409 U.S. 63 (1972) (a mathematical algorithm for converting binary coded decimal to pure binary within a computer’s shift register was patent ineligible subject matter); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016)

(claims that did “not include any requirement for performing the claimed functions of gathering, analyzing, and displaying [desirable data] in real time by use of anything but entirely conventional, generic technology” were patent-ineligible abstract ideas).

Because claim 1 recites a certain method of organizing human activity (i.e., a fundamental economic practice) or an abstract mental process (i.e., observation, judgment, evaluation, and opinion), we agree with the Examiner that claim 1 recites an abstract idea.

*Revised Guidance step 2A, prong two*

Although claim 1 recites an abstract idea, we are persuaded by Appellant that claim 1 is similar to a hypothetical patent-eligible claim directed to a

*combination of the steps (e.g., the ATM providing a random code, the mobile communication device’s generation of the image having encrypted code data in response to the random code, the ATM’s decryption and analysis of the code data, and the subsequent determination of whether the transaction should proceed based on the analysis of the code data) [that] operates in a nonconventional and non-generic way to ensure that the customer’s identity is verified in a secure manner that is more than the conventional verification process employed by an ATM alone.*

Appeal Br. 14 (citing *Subject Matter Eligibility Examples: Business Methods*, Example 35, Claim 2).

In contrast with Appellant’s arguments, the Examiner’s analysis of claim 1 as a whole is merely that, as an ordered combination, claim 1 is directed toward authenticating an identity of a user of a transaction card as being a legitimate cardholder, the user initiating a registration process to register the transaction card with a program offered by the payment card network which is

analogous to organizing human activity . . . , fraud detection . . .  
and to advertising.

Ans. 6; *see also* Final Act. 5. This analysis broadly suggests possible characterizations of claim 1—but fails to provide determinations that show claim 1 merely recites applying the underlying abstract idea using computers as a tool, adds only insignificant extra-solution activity to the underlying abstract idea, or merely provides recitations that generally link the abstract idea to a particular technological environment or field of use. Revised Guidance, 84 Fed. Reg. at 55.<sup>3</sup> The Examiner’s analysis further omits key recitations related to generation, transmission, recordation, receipt, and use of an authentication message. *See* Ans. 6; Final Act. 5. The Examiner considers these recitations in isolation, but not as part of claim 1 when considered as a whole. *See* Ans. 4–6; Final Act. 4–5. Therefore, we are persuaded by Appellant that the Examiner has not shown claim 1 is “*directed* to the judicial exception.” Revised Guidance, 84 Fed. Reg. at 54 (emphasis added); Appeal Br. 19.

Accordingly, we do not sustain the Examiner’s 35 U.S.C. § 101 rejection of claim 1, or claims 3–9, 11–16, 18–24,<sup>4</sup> and 26, which the Examiner rejects for similar reasons.

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<sup>3</sup> We recognize that the Examiner’s Answer pre-dates the Revised Guidance. The lack of pertinent Examiner determinations—based on guidance and substantive law available at the time the Answer was filed—is nonetheless relevant to whether the Examiner’s rejection is sustainable.

<sup>4</sup> Claim 24 is directed to a “computer program embodied on a computer-readable medium.” The Examiner presents no analysis as to whether claim 24 recites one of the four statutory categories of patentable subject under 35 U.S.C. § 101. *See* Revised Guidance, 84 Fed. Reg. at 53–54. Nor does the

35 U.S.C. § 103(A) – WELLER, WALKER

In rejecting claim 1 as obvious over Weller and Walker, the Examiner relies on Weller’s centralized and distributed enrollment flows, in combination with Walker’s embedding of offer codes in billing statements, to teach or suggest *transmitting, by the payment card network server computer, the transaction data message to an issuing bank computing device associated with an issuing bank via the payment card network, the issuing bank having issued the transaction card to the legitimate cardholder, the issuing bank computing device being separate from the payment card network server computer, wherein the issuing bank electronically inserts the program identifier and the authentication message from the transaction data message into a billing record of the transaction card.* Final Act. 8–9 (citing, e.g., Weller Figs. 7, 9; Walker ¶ 48).

Appellant contends the Examiner erred because “Walker merely describes a system for providing *offers* using a billing statement.” Appeal Br. 20. That is, Appellant argues “Walker does not describe or suggest an authentication method that leverages an issuing bank’s billing statement.” *Id.*; *see also* Reply Br. 6. Appellant also argues “Walker does not describe or suggest a payment card network server computer at all.” Appeal Br. 20.

Appellant’s arguments are unpersuasive because, as the Examiner correctly notes, Appellant attacks Walker individually rather than showing

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Examiner analyze whether failure to recite the computer-readable medium as being *non-transitory* means that the claim encompasses non-statutory signals. *See Ex parte Mewherter*, 107 USPQ2d 1857 (PTAB 2013) (precedential). In the event of further prosecution, we recommend the Examiner ascertain whether claim 24, analyzed separately from claim 1, encompass non-statutory subject matter.

error in the Examiner's reliance on the combination of Weller and Walker. *See* Ans. 13–14. For example, the Examiner relies on Weller, not Walker, to teach or suggest the claimed *payment card network server computer*. Final Act. 7 (citing Weller Title, Abstract, ¶ 7).

Furthermore, Walker specifically discloses that its offers “may be customized based on . . . the identity of the consumer.” Walker Abstract. Thus, in accordance with the Examiner's findings and conclusions, an artisan of ordinary skill would have recognized that the offer pointer in Walker could be used to identify or authenticate the user. *See* Ans. 14; *see also* Walker ¶ 48. Therefore, we agree with the Examiner that the combination of Weller and Walker teaches or suggests the disputed recitation. Final Act. 8–9.

Accordingly, we sustain the Examiner's 35 U.S.C. § 103(a) rejection, based on Weller and Walker, of claim 1, and claims 3–9, 11–16, 18–24, 26, which Appellant does not argue separately. Appeal Br. 21.

#### 35 U.S.C. § 103(A) – WELLER, ROLF

In rejecting claim 1 as obvious over Weller and Rolf, the Examiner relies on Weller's centralized and distributed enrollment flows, in combination with Rolf's verification of a bank account through the use of two small deposits, to teach or suggest *transmitting, by the payment card network server computer, the transaction data message to an issuing bank computing device associated with an issuing bank via the payment card network, the issuing bank having issued the transaction card to the legitimate cardholder, the issuing bank computing device being separate from the payment card network server computer, wherein the issuing bank electronically inserts the program identifier and the authentication message*

*from the transaction data message into a billing record of the transaction card.* Final Act. 13–14 (citing, e.g., Weller Figs. 7, 9; Rolf ¶ 75).

Appellant contends the Examiner erred because “Rolf merely describes a system for registering a person as an affiliate member of a multilevel affiliate marketing program.” Appeal Br. 22. That is, Appellant argues “Rolf does not describe or suggest an authentication method that leverages an issuing bank’s billing statement.” *Id.*; *see also* Reply Br. 6. Appellant also argues “Rolf does not describe or suggest a payment card network server computer at all.” Appeal Br. 22.

Appellant’s arguments are unpersuasive because, as the Examiner correctly notes, Appellant attacks Rolf individually rather than showing error in the Examiner’s reliance on the combination of Weller and Rolf. *See* Ans. 13–14. For example, the Examiner relies on Weller, not Rolf, to teach or suggest a *payment card network server computer*. Final Act. 13 (citing Weller Title, Abstract, ¶ 7).

Furthermore, Rolf specifically discloses that “verification steps [that] may include, for example, making two small deposits into the bank account of the user and then requiring the user to confirm online the date and amounts of those deposits.” Rolf ¶ 75. The Specification discloses an authentication message in the form of at least one deposit to an account. *See* Spec. ¶ 41. Thus, Appellant does not persuasively distinguish the claimed authentication (e.g., at least one deposit to an account) message from Rolf’s two small deposits for use in verifying an account. Therefore, we agree with the Examiner that the combination of Weller and Rolf teaches or suggests the disputed recitation. Final Act. 13–14.

Accordingly, we sustain the Examiner's 35 U.S.C. § 103(a) rejection, based on Weller and Rolf, of claim 1, and claims 3–9, 11–16, 18–24, 26, which Appellant does not argue separately. Appeal Br. 23.

### CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1, 3–9, 11–16, 18–24, 26	101	Eligibility		1, 3–9, 11–16, 18–24, 26
1, 3–9, 11–16, 18–24, 26	103(a)	Weller, Walker	1, 3–9, 11–16, 18–24, 26	
1, 3–9, 11–16, 18–24, 26	103(a)	Weller, Rolf	1, 3–9, 11–16, 18–24, 26	
<b>Overall Outcome</b>			1, 3–9, 11–16, 18–24, 26	

### 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