UNITED STATES PATENT AND TRADEMARK OFFICE

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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 JUSTIN XAVIER HOWE

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Appeal 2017-008316[1]
Application 13/890,414[2]
Technology Center 3600

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Before ALLEN R. MacDONALD, JAMES B. ARPIN, and
JOSEPH P. LENTIVECH, *Administrative Patent Judges.*

ARPIN, *Administrative Patent Judge.*

I.   DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) of a rejection of claims 1–
3, 5–8, 10, 12–19, 31, 32, 34, 36, 38, 43 and 44. Br. 2. Claims 4, 9, 11, 20–
30, 33, 35, 37, 39–42, and 45 are cancelled. Final Act. 2. We have
jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] In this Decision, we refer to Appellant's Appeal Brief ("Br.," filed
November 15, 2016); the Final Office Action ("Final Act.," mailed May 20,
2016); the Examiner's Answer ("Ans.," mailed February 8, 2017); and the
originally-filed Specification ("Spec.," filed May 9, 2013).

[2] According to Appellant, the real party-in-interest is MasterCard
International, Inc. Br. 2.

II. STATEMENT OF THE CASE

Appellant's recited methods and systems relate to updating a payment cardholder's personal data and, more particularly, to methods and systems enabling the propagation of cardholder personal data updates and the synchronization of updates of cardholder personal data with an address verification system ("AVS"). *See* Spec. ¶ 1. Before authorizing a payment transaction, an issuing bank and a merchant bank may compare personal data associated with the cardholder for verification purposes. *See* Spec. ¶ 5. As noted above, claims 1–3, 5–8, 10, 12–19, 31, 32, 34, 36, 38, 43, and 44 are pending. Claims 1, directed to the recited methods, and 31, directed to systems for performing such methods, are independent. Br. Claims App'x. Claims 2, 3, 5–8, 10, 12–19, 43, and 44 depend directly or indirectly from claim 1; and claims 32, 34, 36, and 38 depend directly from claim 31. *Id.*

Claim 1, reproduced below, is illustrative.

1. A computer-implemented method for processing updated payment cardholder personal data, the method comprising:

    maintaining a verification synchronization data structure storing at least one data item associated with a payment card and a merchant, the merchant not yet notified regarding the payment cardholder's personal data update;

    monitoring transactions transacted by the payment cardholder in a card data feed in real-time and storing associated transaction history data, the transaction history data including the payment card used, the merchant transacted with, and the date of the most recent transaction;

    receiving, by at least one processing device, updated personal data associated with a payment cardholder, the at least one processing device associated with a personal data update service;

obtaining, by the at least one processing device, data identifying at least one payment system entity with which the payment cardholder has a transaction history, the data identifying the at least one payment system entity stored by the personal data update service and updated periodically or upon occurrence of an event;

receiving notification of a transaction needing authorization between the payment cardholder and the merchant;

accessing transaction data associated with the transaction, the transaction data including identification of the payment card associated with the payment cardholder and the merchant, and verification data associated with the payment card that is used to authorize the transaction;

determining if the verification synchronization data structure includes a data item that is associated with the identified payment card and the merchant, and, if so, replacing the verification data included in the transaction data with the updated personal data before a process to authorize the transaction; and

transmitting via an electronic notification system associated with the at least one processing device, notification of the payment cardholder's personal data update to the identified at least one payment system entity if the at least one payment system entity is located in a notification file stored by the personal data update service in real-time during the transaction in order that the transaction is not denied due to an address updated by one entity,

wherein the receiving, obtaining, and transmitting by the at least one processing device are performed independent of administration by an issuing bank that issued a payment card to the payment cardholder, the independently performed administration performed by a processing device separate from

3

the at least one processing device associated with the personal
data update service.

Id.

III. THE REJECTION

Claims 1–3, 5–8, 10, 12–19, 31, 32, 34, 36, 38, 43, and 44 stand
rejected under 35 U.S.C. § 101 "because the claimed invention is directed to
a judicial exception (i.e., a law of nature, a natural phenomenon, or an
abstract idea) without significantly more," i.e., because the claimed methods
and systems are patent-ineligible subject matter. Final Act. 2.[3]

IV. APPELLANT'S CONTENTIONS

Appellant presents three contentions:

1. Has the Examiner erred in determining that the pending claims are
   directed to an abstract idea? Br. 7–8.

2. Has the Examiner erred in determining that the pending claims are
   patent ineligible although the pending claims allegedly depend upon a
   specific structure of components that provide a technological solution
   to a technological problem and are narrowly drawn so as not to
   preempt any and all methods and systems for processing updated
   cardholder payments? *Id.* at 8–9.

3. Has the Examiner erred in determining that the pending claims do not
   include additional elements that are sufficient to amount to
   significantly more than the abstract idea? *Id.* at 9–11.

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[3] The Examiner states that "Claims 1-3, 5-8, 10, 12-19, 31, 32, 34, 36, 38, 43
and 44 are allowable over the prior art of record." Final. Act. 3.

Appellant relies on the same contentions with respect to each of the pending claims. We are not persuaded of Examiner error with regard to these contentions.

V.   ANALYSIS[4]

We have reviewed the Examiner's rejection in light of Appellant's Appeal Brief arguments that the Examiner has erred.

A. Legal Principles

Under 35 U.S.C. § 101, a patent may be obtained for "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." The U.S. Supreme Court has "long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, *and abstract ideas* are not patentable." *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014) (emphasis added; quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). Accordingly, in applying the § 101 exception, the Court cautioned:

> [W]e must distinguish between patents that claim the "'buildin[g] block[s]'" of human ingenuity and those that integrate the building blocks into something more, thereby "transform[ing]" them into a patent-eligible invention. The former "would risk disproportionately tying up the use of the underlying" ideas, and are therefore ineligible for patent protection. The latter pose no comparable risk of pre-emption, and therefore remain eligible for the monopoly granted under our patent laws.

Alice, 134 S. Ct. at 2354–55.

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[4] All MPEP citations herein are to MPEP Rev. 08.2017, January 2018.

The Court in *Alice* reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 82–83 (2012), "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 134 S. Ct. at 2355. The first step in that analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts," such as an abstract idea. *Id.* For example, a fundamental economic practice is an abstract idea:

> [In *Bilski v. Kappos*], the Court grounded its conclusion that all of the claims at issue were abstract ideas in the understanding that risk hedging was a "'fundamental economic practice.'" 561 U.S.[593,] 611[(2010)].

Alice, 134 S. Ct. at 2357.

The Court acknowledged in *Mayo* that "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo*, 566 U.S. at 71. We, therefore, look to whether the claims focus on a specific method or means that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016). If the claims are not directed to an abstract idea, the inquiry ends. *Id.* at 1339. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered "individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 78, 79).

Central to our analysis is the fundamental principle that the *Alice* framework must be applied to the claims, as properly construed. As our reviewing court has stated, "[t]he § 101 inquiry must focus on the language of the Asserted Claims themselves." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016); *see also Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013) (admonishing that "the important inquiry for a § 101 analysis is to look to the claim"); *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343, 1346 (Fed. Cir. 2014) (focusing on "whether the *claims* of the asserted patents fall within the excluded category of abstract ideas") (emphasis added)).

These principles are based on long-established jurisprudence that "[i]t is the claims [that] define the metes and bounds of the invention entitled to the protection of the patent system." *In re Warmerdam*, 33 F.3d 1354, 1360 (Fed. Cir. 1994) (citing *Zenith Lab. Inc. v. Bristol–Myers Squibb Co.*, 19 F.3d 1418, 1424 (Fed. Cir. 1994)); *see also In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998) ("[T]he name of the game is the claim.").

B. Examiner's § 101 Rejection - Alice/Mayo Steps 1 and 2

Applying step one of the *Alice/Mayo* analysis, the Examiner concludes claim 1 is directed to a "judicial exception" because:

> The claim recites the steps of monitoring cardholder's transactions, receiving updated cardholder data, transmitting a notification of the update. In other words, the claim recites comparing and formatting information for transmission. This is simply the organization and manipulation of data which can be performed mentally and is an idea of itself. It is similar to other concepts that have been identified as abstract by the courts, such as using categories to organize, store and transmit information in

> Cyberfone or comparing new and stored information and using rules to identify options in SmartGene. Therefore, the claim is directed to an abstract idea.

Final Act. 4.[5]

Applying step two of the *Alice/Mayo* analysis, the Examiner concludes claim 1 recites an abstract idea "without significantly more" because:

> The claim recites the additional limitations of using an electronic notification system to transmit a notification. The electronic notification system simply performs the generic computer functions of transmitting data. Generic computers performing generic computer functions, alone, do not amount to significantly more than the abstract idea. Viewing the limitations as an ordered combination does not add anything further than looking at the limitations individually. When viewed either individually, or as an ordered combination, the additional limitations do not amount to a claim as a whole that is significantly more than the abstract idea.

Id. at 4–5.

C. Appellant's § 101 Contentions

1. Claim 1 is not Directed to an Abstract Idea

Focusing on the recitations of claim 1, Appellant contends that the Examiner erred in rejecting the pending claims as patent-ineligible subject matter because the claim satisfies *step one* of the *Alice/Mayo* analysis. Referring to Example 1 of the 2014 Interim Guidance in Patent Subject Matter Eligibility, Appellant argues that "[i]n Example 1, claims are directed to '*software technology for isolation and extraction of malicious code*

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[5] For purposes of this Decision, we do not decide here whether the idea of updating personal data to permit verification of cardholder transactions also is a "fundamental economic practice." *See Bilski*, 561 U.S. at 611.

contained in an electronic communication.' This is analogous to the subject invention, in which verification data in an electronic transmission is identified and replaced with updated personal data." Br. 7. Specifically, Appellant notes that claim 1 recites "*determining if the verification synchronization data structure includes a data item that is associated with the identified payment card and the merchant, and, if so, replacing the verification data included in the transaction data with the updated personal data before a process to authorize the transaction.*" *Id.* at 7–8.[6] Referring to this step, Appellant asserts that

> claim 1 of the Application is directed to a method that removes verification data from transaction data associated with a transaction, and replaces the removed verification data with updated personal data for the cardholder engaged in the transaction, thereby creating a new version of the transaction data, i.e., the electronic communication.

Id. at 7–8. Thus, Appellant contends that replacing out-of-date verification data is like removing malicious code. Therefore, relying on Example 1 of the 2014 Interim Guidance, Appellant contends that the pending claims are patent eligible.

Regarding the 2014 Interim Guidelines, the Examiner notes that Example 1 is directed "towards performing isolation and eradication of computer viruses, worms, and other malicious code, a concept inextricably

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[6] Independent claim 31 similarly provides that the "service module stored in the memory and executable by the computer device" "*determine[s]* if the verification synchronization data structure includes a data item that is associated with the identified payment card and the merchant, and, if so, *replac[es]* the verification data included in the transaction data with the updated personal data before a process to authorize the transaction." Br. Claims App'x (emphases added).

tied to computer technology and distinct from the types of concepts found by the courts to be abstract." Ans. 4. The pending claims, however, recite that data is received and replaced, "*if necessary.*" *Id.* Consequently, unlike Example 1, the Examiner argues that there is no problem solved by the methods and systems of the pending claims that is particular to computer technology, and the subject matter of Example 1 is not analogous to the methods and systems of the pending claims. *Id.* We agree.

In this regard, we further note that the "replacing" limitations of claims 1 and 31, upon which Appellant relies to show that its recited methods and systems are not directed to a judicial exception, are conditional. Specifically, unless the condition precedent is met, the "replacing" step of claim 1 or "replacing" operation of claim 31, does not occur. In *Ex parte Schulhauser*, Appeal 2013-007847, slip op. 8 (PTAB April 28, 2016) (precedential) [7], the panel concluded that "claim 1 as written covers at least two methods, one in which the prerequisite condition for the triggering step is met and one in which the prerequisite condition for the determining step is met." The same dichotomy appears to be true for the independent claims at issue here. Here, claim 1 also covers at least two methods, one in which the prerequisite condition for the "replacing" step is met and one in which it is not.[8] If the prerequisite condition is not met, no replacement of the verification data is "necessary." *See also* Br. Claim App'x, Claim 31 (the

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[7] *Ex parte Schulhauser* issued about one month before the Final Rejection, but was not designated a Precedential until October 4, 2016, weeks before the filing of the Appeal Brief, and well before the filing of the Examiner's Answer.

[8] We note that the "transmitting" step of claim 1 and the "transmit" operation of claim 31 are similarly conditional. Br. Claim App'x.

"determine" limitation and the "transmit" limitation also are conditional).
Therefore, we are not persuaded that the Examiner erred in determining that
the pending claims are directed to an abstract idea.

2. *Specific Structure of Components and Lack of Preemption*

Appellant notes that, in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*,
"[t]he Court further concluded that the claims of the Amdocs patents are
'tied to a specific structure of various components,' are 'narrowly drawn to
not preempt,' and do 'not merely combine components in a generic
manner.'" Br. 6 (quoting *Amdocs*, 841 F.3d 1288, 1301 (Fed. Cir. 2016),
cert. denied, 138 S. Ct. 469 (Mem.) (2017)). Specifically, Appellant
contends that, in the final element of each of claims 1 and 31, the claims
recite

> the steps of receiving, obtaining and transmitting that are
> performed by a processing device independent of a processing
> device of the issuing bank. This clearly recites a specific
> structure of components, e.g., a processing device to perform
> certain important steps of the inventive method that is expressly
> recited as independent from a processing device of the issuing
> bank.

Id. at 8–9. Thus, Appellant contends that, as with *Amdocs*, the recited
processing devices are different from conventional devices and "provide a
technological solution to a technological problem." *Id.* at 9.

With regard to *Amdocs*, the Examiner acknowledges that "[i]n
Amdocs, the claim entail[ed] an unconventional technological solution
(enhancing data in a distributed fashion) to a technological problem
(massive record flows which previously required massive databases)."
Ans. 5. Unlike *Amdocs*, however, the Examiner found that the separate
processing devices and other components function in a conventional manner

and merely as additional components to the recited methods and systems.
Id. We agree.

In addition, Appellant contends that the pending claims "are 'narrowly drawn to not preempt any and all' methods for processing updated cardholder payments." Br. 9. In particular, Appellant contends that the benefits sought by the methods and systems of the pending claims are achieved by the recited combination of components, e.g., "the separate and independent processing devices - one for the issuing bank and another for the personal data update service." *Id.* (citing Spec. ¶¶ 64, 65). Thus, Appellant contends that the specific structure of components does not preempt any and all methods for updating cardholder payments.

"[W]hile a preemptive claim may be ineligible, the absence of complete preemption does not demonstrate that a claim is eligible." Comm'r for Patents Memorandum, "Formulating a Subject Matter Eligibility Rejection and Evaluating the Applicant's Response to a Subject Matter Eligibility Rejection," 6–7 (May 4, 2016). "[E]mploying well-known computer functions to execute an abstract idea, even when limiting the use of the idea to one particular environment, does not add significantly more, similar to how limiting the computer implemented abstract idea in [*Parker v. Flook*, 437 U.S. 584 (1978)] to petrochemical and oil-refining industries was insufficient." *Id.* at 4–5. In response to Appellant's contention that the pending claims do not completely preempt the abstract idea, the Examiner notes that:

> Preemption is not a standalone test for patent eligibility. Preemption concerns have been addressed by the examiner through the application of the two-step framework. Applicant's attempt to show alternative uses of the abstract idea outside the

scope of the claims does not change the conclusion that the claims are directed to patent ineligible subject matter. Similarly, applicant's attempt to show that the recited abstract idea is a very narrow and specific one is not persuasive. A specific abstract idea is still an abstract idea and is not eligible for patent protection without significantly more recited in the claim.

Ans. 4–5; *see* MPEP 2106.07(b). Thus, having considered preemption in the context of the two-step, *Alice/Mayo* analysis, the Examiner reaffirms that the pending claims neither are directed to an improvement to the functioning of a computer or to any other technology or technical field nor do the additional elements in combination or individually amount to an inventive concept. Ans. 4–5; *see id.* at 5–8. We agree.

3. *Additional Elements Are Not Significantly More Than the Abstract Idea*

Appellant notes that, in *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, our reviewing court found that "[t]he inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art [and that] an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces." Br. 9 (quoting *BASCOM*, 827 F.3d 1341, 1350 (Fed. Cir. 2016)). In *BASCOM*, the inventive concept was "installation of a filtering tool at a specific location, *remote from the end-users*, with customizable filtering features specific to each end-user." *BASCOM*, 827 F.3d at 1350 (emphasis added). Similarly, Appellant contends that the recitation of a processing device *separate and independent* from a processing device of the issuing bank differentiates the recited combination of components from a conventional and generic arrangement of components and demonstrates an

13

inventive step, which is significantly more than the identified abstract idea.
Br. 9–10.

> In particular, Appellant contends that the Specification notes that:

> > During an authentication phase of a transaction, the personal data may be used by authenticating entities to authenticate the transaction. Entities involved in the authentication process may include, for example, the issuing bank that issued the payment card to the cardholder, the merchant, and/or the merchant bank that authorizes payment card transactions and transfers money on behalf of the merchant. In some instances, the issuing bank and the merchant bank may compare personal data associated with the cardholder for verification purposes before authorizing the transaction. *However, when the personal data stored by the issuing bank and the merchant bank does not match, such as due to an update of personal data with only one of the authenticating entities, the transaction may be denied.*

Spec. ¶ 5; *see* Br. 10. Appellant notes, however, that the Specification states that

> > Processor 70 is administered independently of an issuing bank 16 such that it *can* operate without receiving input data from, or outputting data to, an issuing bank 16. . . . [P]rocessor 70 *may* exchange information with other entities of the payment system 100 and perform processing functions without the need for permission from an issuing bank 16, being controlled by an issuing bank 16, receiving input from an issuing bank 16, or providing output to the issuing bank 16.

Br. 10 (quoting Spec. ¶¶ 64, 65 (emphases added)). Appellant contends that these separate processors solve the problem identified in the Specification.

> The Examiner disagrees and again notes that:

> > The electronic notification system simply performs the generic computer functions of transmitting data. Generic computers performing generic computer functions, alone, do not amount to significantly more than the abstract idea. Viewing the limitations

14

> as an ordered combination does not add anything further than looking at the limitations individually. When viewed either individually, or as an ordered combination, the additional limitations do not amount to a claim as a whole that is significantly more than the abstract idea.

Ans. 6; *supra* Section V.B.; *see* MPEP 2106.05(d). Although the Specification may disclose embodiments, in which personal data is not shared between the processor having updated cardholder personal data and the processor associated with the issuing bank, neither the pending claims nor the Specification is limited to these embodiments.[9] *Cf.* Br. Claim App'x (Claim 12 reciting "instead of replacing the verification data with the updated personal data, replacing the verification data with at least a portion of the historical personal data."). Further, as discussed above, the "replacing" step of claim 1 and the "replacing" operation of claim 31 need not occur. *See supra* Section V.C.1. Consequently, we agree with the Examiner that, in the pending claims, "the focus of the claims is not on such an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools. As Appellant states the instant invention 'improves the authorization process' which is an abstract idea." *Id.* at 8 (citing Br. 10); *see* MPEP 2106.04(a).

Consequently, we are not persuaded that the Examiner erred in rejecting claims 1–3, 5–8, 10, 12–19, 31, 32, 34, 36, 38, 43, and 44; and we sustain the rejections thereof.

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[9] We further note that, in the "wherein" clause, claim 31 recites "*the* at least one processing device," but recites no antecedent basis for this component. Br. Claim App'x. It is not clear whether this is merely a typographical error, and Applicant intended to refer to the "computer device," rather than "*the* at least one processing device." If prosecution resumes in this application, Applicant may wish to amend claim 31 to address this deficiency.

VI.   DECISION

For the above reasons, we affirm the Examiner's decision rejecting claims 1–3, 5–8, 10, 12–19, 31, 32, 34, 36, 38, 43, and 44.

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