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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* VIJAY ROYYURU

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Appeal 2017-005154  
Application 12/641,239  
Technology Center 3600

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Before MURRIEL E. CRAWFORD, NINA L. MEDLOCK, and  
CYNTHIA L. MURPHY, *Administrative Patent Judges*.

MEDLOCK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant<sup>1</sup> appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–18. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the term “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Our decision references Appellant's Appeal Brief (“Appeal Br.,” filed November 1, 2016) and Reply Brief (“Reply Br.,” filed February 16, 2017), and the Examiner's Answer (“Ans.,” mailed December 16, 2016) and Non-Final Office Action (“Non-Final Act.,” mailed June 2, 2016). Appellant identifies the real party in interest as “The First Data Corporation, of Greenwood Village, Colorado.” Appeal Br. 3.

## CLAIMED INVENTION

Appellant describes that the present invention “relates, in general, to financial account enrollment, and more particularly, to enrollment authentication using a partial primary account number (PAN)” (Spec. ¶ 2).

Claims 1 and 13 are the independent claims on appeal. Claim 1, reproduced below with bracketed notations added, is illustrative of the claimed subject matter:

1. A method of implementing enrollment authentication, the method comprising:
  - [(a)] receiving, by a processing system from a customer, a partial primary account number (PAN) and an identifier of an issuing financial institution of the partial PAN;
  - [(b)] based on transaction history related to the partial PAN, presenting, from the processing system, a plurality of challenge questions to the customer;
  - [(c)] receiving, by the processing system from the customer, answers to the plurality of challenge questions;
  - [(d)] based on the partial PAN, the identifier of the issuing financial institution, and the answers to the plurality of challenge questions, resolving, by the processing system, a complete PAN;
  - [(e)] prompting the customer to select a mutual trust phrase;
  - [(f)] receiving, by the processing system, the selected mutual trust phrase;
  - [(g)] placing a call from an interactive voice response (IVR) system to the customer;
  - [(h)] playing back, by the IVR system to the customer, the selected mutual trust phrase;
  - [(i)] receiving, from a telephone, the customer’s personal identification number (PIN) associated with the complete PAN; and
  - [(j)] using, by the processing system, the complete PAN and PIN combination to authenticate the customer.

## REJECTION

Claims 1–18 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

## ANALYSIS

Appellant argues the pending claims as a group (Appeal Br. 5–15). We select independent claim 1 as representative. The remaining claims, thus, stand or fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Under 35 U.S.C. § 101, an invention is patent eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (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 Corp.*, 573 U.S. at 217. The first step in that analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* If the claims are not directed to a patent-ineligible concept, e.g., an abstract idea, the inquiry ends. 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 there are additional elements that “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, 566 U.S. at 79, 78). This is “a search for an ‘inventive concept’ — *i.e.*, 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.’” *Id.* at 217–18 (alteration in original).

In rejecting the pending claims under 35 U.S.C. § 101, the Examiner determined that the claims are directed to “customer authentication,” i.e., to a method of organizing human activity and an idea of itself, and, therefore, to an abstract idea (Non-Final Act. 3–4). The Examiner also determined that the claims do not include additional elements that are sufficient to amount to significantly more than the abstract idea itself (*id.* at 4–6).

After Appellant’s briefs were filed, and the Examiner’s Answer mailed, the U.S. Patent and Trademark Office (the “USPTO”) published revised guidance on January 7, 2019 for use by USPTO personnel in evaluating subject matter eligibility under 35 U.S.C. § 101. 2019 REVISED PATENT SUBJECT MATTER ELIGIBILITY GUIDANCE, 84 Fed. Reg. 50, 57 (Jan. 7, 2019) (the “2019 Revised Guidance”). That guidance revised the USPTO’s examination procedure with respect to the first step of the *Mayo/Alice* framework by (1) “[p]roviding groupings of subject matter that [are] considered an abstract idea”; and (2) clarifying that a claim is not “directed to” a judicial exception if the judicial exception is integrated into a practical application of that exception. *Id.* at 50. The 2019 Revised Guidance, by its terms, applies to all applications, and to all patents resulting from applications, filed before, on, or after January 7, 2019. *Id.*<sup>2</sup>

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<sup>2</sup> The 2019 Revised Guidance supersedes MANUAL OF PATENT EXAMINING PROCEDURE (“MPEP”) § 2106.04(II) and also supersedes all versions of the USPTO’s “Eligibility Quick Reference Sheet Identifying Abstract Ideas.” *See* 2019 Revised Guidance, 84 Fed. Reg. at 51 (“Eligibility-related guidance issued prior to the Ninth Edition, R-08.2017, of the MPEP

*Step One of the Mayo/Alice Framework (2019 Revised Guidance, Step 2A)*

The first step in the *Mayo/Alice* framework, as mentioned above, is to determine whether the claims at issue are “directed to” a patent-ineligible concept, e.g., an abstract idea. *Alice Corp.*, 573 U.S. at 217. This first step, as set forth in the 2019 Revised Guidance (i.e., Step 2A), is a two-prong test; in Step 2A, Prong One, we look to whether the claim recites a judicial exception, e.g., one of the following three groupings of abstract ideas: (1) mathematical concepts; (2) certain methods of organizing human activity, e.g., fundamental economic principles or practices, commercial or legal interactions; and (3) mental processes. 2019 Revised Guidance, 84 Fed. Reg. at 54. If so, we next consider whether the claim includes additional elements, beyond the judicial exception, that “integrate the [judicial] exception into a practical application,” i.e., that 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 (“Step 2A, Prong Two”). *Id.* at 54–55. Only if the claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application do we conclude that the claim is “directed to” the judicial exception, e.g., an abstract idea. *Id.*

We are not persuaded by Appellant’s arguments that the Examiner erred in determining that claim 1 is directed to an abstract idea (Appeal Br. 6–13). The Federal Circuit has explained that “the ‘directed to’ inquiry applies a stage-one filter to claims, considered in light of the specification,

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(published Jan. 2018) should not be relied upon.”). Accordingly, Appellant’s arguments challenging the sufficiency of the Examiner’s rejection will not be addressed to the extent those arguments are based on currently superseded USPTO guidance.

based on whether ‘their character as a whole is directed to excluded subject matter.’” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (quoting *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)). It asks whether the focus of the claims is on a specific improvement in relevant technology or on a process that itself qualifies as an “abstract idea” for which computers are invoked merely as a tool. *See id.* at 1335–36. Here, the Specification (including the claim language) makes clear that the claims focus on an abstract idea, and not on any improvement to computer technology and/or functionality.

The Specification is entitled “ENROLLMENT AUTHENTICATION WITH ENTRY OF PARTIAL PRIMARY ACCOUNT NUMBER (PAN)” and describes, in the Background section, that “[p]resently, presentation of a financial card (e.g., a STAR network card) or data from the financial card and entry of a PIN into a tamper-resistant PIN entry device are how customers are authenticated” (Spec. ¶ 3). With general (non-Internet, non-mobile, etc.) enrollment authentication, a customer presents the financial card at a magnetic stripe reader and enters the PIN into a secure PIN entry device; however, this is not possible in e-commerce and mobile enrollment authentication where customers are not physically present during the enrollment process and are attempting to conduct the enrollment process remotely (*id.* ¶ 4). “Hence, improvements in the art are needed” (*id.*).

The claimed invention is ostensibly intended to address this issue by providing a technique for authenticating an enrollment request by gathering credentials from the consumer, like those presented in a PIN-based financial transaction, without requiring entry of the PIN on a tamper-resistant PIN-entry device (*id.* ¶14). Claim 1, thus, recites a method of implementing

enrollment authentication comprising: (1) “receiving, by a processing system from a customer, a partial primary account number (PAN) and an identifier of an issuing financial institution of the partial PAN” (step (a)); (2) presenting challenge questions to the customer and receiving answers, i.e., “based on transaction history related to the partial PAN, presenting, from the processing system, a plurality of challenge questions to the customer” and “receiving, by the processing system from the customer, answers to the plurality of challenge questions” (steps (b) and (c)); (3) identifying the customer’s complete PAN based on the partial PAN, the issuing financial institution, and the answers to the challenge questions, i.e., “based on the partial PAN, the identifier of the issuing financial institution, and the answers to the plurality of challenge questions, resolving, by the processing system, a complete PAN” (step (d)); (4) receiving, by the processing center, a customer-selected mutual trust phrase, i.e., “prompting the customer to select a mutual trust phrase” and “receiving, by the processing system, the selected mutual trust phrase” (steps (e) and (f)); (5) placing a telephone call to the customer and playing the mutual trust phrase back to assure the customer that the processing center is a legitimate authenticating authority and to, thus, establish a level of trust, i.e., “placing a call from an interactive voice response (IVR) system to the customer” and “playing back, by the IVR system to the customer, the selected mutual trust phrase” (steps (g) and (h)); and (6) receiving the customer’s PIN, via telephone, and using the PIN and the complete PAN to authenticate the customer, i.e., “receiving, from a telephone, the customer’s personal identification number (PIN) associated with the complete PAN” and “using, by the processing system, the complete PAN and PIN combination to

authenticate the customer” (steps (i) and (j)). We agree with the Examiner that these limitations, when given their broadest reasonable interpretation, recite authenticating a customer, i.e., a fundamental economic practice, which is a method of organizing human activity and, therefore, an abstract idea. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52. *Cf. Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1372 (Fed. Cir. 2017) (holding claims to verifying (authenticating) payment information directed to an abstract idea under *Alice* step one); *Smartflash LLC v. Apple LLC*, 680 F. App’x 977, 982-83 (Fed. Cir. 2017) (holding claims to controlling access to content data based on verification of payment information patent ineligible); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370-73 (Fed. Cir. 2011) (holding claims to a computer-implemented system for “verifying the validity of a credit card transaction over the Internet” patent ineligible).

Having concluded that claim 1 recites a judicial exception, i.e., an abstract idea (Step 2A, Prong One), we next consider whether the claim recites additional elements that integrate the judicial exception into a practical application (Step 2A, Prong Two).

The only additional elements recited in claim 1, beyond the abstract idea, are “a processing system”; “an interactive voice response (IVR) system”; and a “telephone” —elements that, as the Examiner observed, are recited at a high level of generality (Non-Final Act. 5), i.e., as generic components (*see, e.g.*, Spec. ¶¶ 36–40, 46–52). We find no indication in the Specification that the operations recited in claim 1 require any specialized computer hardware or other inventive computer components, i.e., a particular machine, invoke any assertedly inventive programming, or that the

claimed invention is implemented using other than generic computer components to perform generic computer functions. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (“[A]fter *Alice*, there can remain no doubt: recitation of generic computer limitations does not make an otherwise ineligible claim patent-eligible.”).

We also find no indication in the Specification that the claimed invention effects a transformation or reduction of a particular article to a different state or thing. Nor do we find anything of record, short of attorney argument, that attributes an improvement in technology and/or a technical field to the claimed invention or that otherwise indicates that the claimed invention integrates the abstract idea into a “practical application,” as that phrase is used in the 2019 Revised Guidance.<sup>3</sup>

Appellant argues that the claims are not directed to an abstract idea and are “necessarily rooted in computer technology,” as in *DDR Holdings*, because the claims “necessarily require a special-purpose computer rather than a generic computer” (Appeal Br. 7). But, as described above, we find no indication in the Specification that the operations recited in claim 1 require any specialized computer hardware or other inventive computer components, or that the claimed invention is implemented using other than generic components operating in their normal, routine, and expected manner.

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<sup>3</sup> The 2019 Revised Guidance references MPEP § 2106.05(a)–(c) and (e) in describing the considerations that are indicative that an additional element or combination of elements integrates the judicial exception, e.g., the abstract idea, into a practical application. 2019 Revised Guidance, 84 Fed. Reg. at 55. If the recited judicial exception is integrated into a practical application, as determined under one or more of these MPEP sections, the claim is not “directed to” the judicial exception.

Indeed, in describing the “computer system 400 that can perform the methods of the invention,” the Specification states that the computer system comprises hardware elements, including, without limitation, “one or more general-purpose processors” (Spec. ¶¶ 36, 37). The Specification also describes that the user device can be any electronic device, e.g., an Internet-enabled mobile telephone, capable of communicating via a network and/or displaying and navigating web pages or other types of electronic documents (*id.* ¶ 46) and that the network “can be any type of network familiar to those skilled in the art that can support data communications using any of a variety of commercially-available protocols” (*id.* ¶ 47).

Appellant argues that the claims recite “the use of IVR devices, which are not general purpose computers, but rather specially programmed computing devices that utilize text to speech technology” and that the claims, moreover, “require the reception of a PIN over a telephone voice network, which is not a function performed by general purpose computers” (Appeal Br. 7). Yet, the IVR device is described in the Specification in general terms only, without any structural particulars, or any other indication that the device is other than generic. *See, e.g.*, Spec., Fig. 3 (showing “IVR System” 317 as a black box). Courts also have recognized receiving and transmitting data over a network as well-understood, routine, and conventional functions where, as here, they are claimed in a merely generic manner. *See, e.g., In re TLI Comm’ns LLC Patent Litig.*, 823 F.3d 607, 610 (Fed. Cir. 2016) (using a telephone for image transmission); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (sending messages over a network); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350,

1355 (Fed. Cir. 2014) (computer receives and sends information over a network).

Appellant also variously argues that the § 101 rejection should be withdrawn in light of *Ex parte Ravenel*, Appeal No. 2015-003604 (PTAB April 1, 2016) (Appeal Br. 7–9; *see also* Reply Br. 4–5). Yet, what a different panel did in a different situation under a different set of facts has little bearing on the proper disposition of this case. *Ravenel* also is a non-precedential decision of the Board; therefore, it is not binding on this panel.

Further, to the extent Appellant relies for support on the line of reasoning articulated in *In re Alappat*, 33 F.3d 1526, 1543 (Fed. Cir. 1994), i.e., that a general purpose computer becomes a “special purpose computer” once programmed to perform particular functions (Appeal Br. 7), we note for the record that the Federal Circuit, in *Eon Corp. v. AT&T Mobility LLC*, 785 F.3d 616, 623 (Fed. Cir. 2015), explicitly observed that “*Alappat* has been superseded by *Bilski*, 561 U.S. at 605–06, 130 S. Ct. 3218, and *Alice Corp. v. CLS Bank Int’l*, — U.S. —, 134 S. Ct. 2347, 189 L.Ed.2d 296 (2014).”

The Specification discloses, as described above, that with the emergence of e-commerce, mobile banking transactions, and mobile payment transactions, a problem existed with authenticating first-time enrollment requests coming from a consumer to a financial payment network with the same level of security of existing PIN-based financial card transactions because the customer was not physically present during the enrollment process and, therefore, could not simply present his or her financial card at a magnetic stripe reader and enter a PIN into a tamper-resistant PIN entry device (Spec. ¶¶ 3, 4). Appellant maintains that the

present claims provide technological improvements in that the claims provide “methods that involve receiving, a partial primary account number (PAN) from a first source[,] and later from a second source, a customer’s personal identification number (PIN) associated with the complete PAN,” and, thus, provide “solutions for remote enrollment solutions [sic] that do not require the use of a tamper proof PIN entry-device” (Appeal Br. 9–10). But, we are not persuaded that this is a technological improvement, as opposed to an improvement in a business practice, where, as described above, there is no indication in the Specification that the operations recited in claim 1 require any specialized computer hardware or other inventive computer components, i.e., a particular machine, invoke any assertedly inventive programming, or that the claimed invention is implemented using other than generic computer components to perform generic computer functions. As the court explained in *Enfish*, the relevant inquiry is not whether there is a business challenge resolved by the claimed invention, but whether the challenge is one rooted in technology, or one where the proposed solution is merely using computers as a tool. *See Enfish*, 822 F.3d at 1335–36.

Appellant’s claimed invention, in essence, is directed to authenticating a customer in connection with a financial transaction — albeit using computer-based components to achieve that end. But, the claimed invention is not “necessarily rooted in computer technology” in the sense contemplated by *DDR Holdings* where the claimed invention solved a challenge particular to the Internet, i.e., retaining website visitors who, if adhering to the routine, conventional functioning of Internet hyperlink protocol, would be transported instantly away from a host’s website after

“clicking” on an advertisement and activating a hyperlink. *DDR Holdings*, 773 F.3d at 1257.

Appellant also ostensibly maintains that claim 1 is not directed to an abstract idea because, like the claims in *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), the present claims are “limited to specific methods for enrollment” (Appeal Br. 11). But, that argument is not persuasive at least because the Federal Circuit premised its determination that the claims in *McRO* were patent eligible, not merely on the specificity of the claimed animation scheme, but on the fact that the claims, when considered as a whole, were directed to a technological improvement over existing, manual 3-D animation techniques and used limited rules in a process specifically designed to achieve an improved technological result in conventional industry practice. *McRO*, 837 F.3d at 1316. We are not persuaded that claim 1 involves any comparable technological improvement as opposed to an improvement in a business practice, i.e., authenticating a consumer. And, to the extent, Appellant maintains that claim 1 is patent eligible because the claim poses no risk of preemption, we note that preemption is not the sole test for patent eligibility. “The Supreme Court has made clear that the principle of preemption is the basis for the judicial exceptions to patentability” and “[f]or this reason, questions on preemption are inherent in and resolved by the § 101 analysis.” *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) (citing *Alice Corp.*, 573 U.S. at 216). “[P]reemption may signal patent ineligible subject matter [but] the absence of complete preemption does not demonstrate patent eligibility.” *Id.*

We conclude, for the reasons outlined above, that claim 1 recites a method of organizing human activity, i.e., an abstract idea, and that the additional elements recited in the claim are no more than a generic components used as tools to perform the recited abstract idea. As such, they do not integrate the abstract idea into a practical application. *See Alice Corp.*, 573 U.S. at 223–24 (“[W]holly generic computer implementation is not generally the sort of ‘additional featur[e]’ that provides any ‘practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.’” (quoting *Mayo*, 566 U.S. at 77)). Accordingly, we agree with the Examiner that claim 1 is directed to an abstract idea.

*Step Two of the Mayo/Alice Framework (2019 Revised Guidance, Step 2B)*

Having determined under step one of the *Mayo/Alice* framework that claim 1 is directed to an abstract idea, we next consider under Step 2B of the 2019 Revised Guidance, the second step of the *Mayo/Alice* framework, whether claim 1 includes additional elements or a combination of elements that provides an “inventive concept,” i.e., whether the additional elements amount to “significantly more” than the judicial exception itself.

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

Appellant argues that even if claim 1 is directed to an abstract idea, the claim is nonetheless patent eligible because it is tied to a particular machine, i.e., “a telephone and an IVR system that is configured to perform specific functions” (Appeal Br. 13; *see also* Reply Br. 5). We disagree.

The Federal Circuit has recognized that the machine-or-transformation test,<sup>4</sup> although not the only test, “can provide a ‘useful clue’” to patent eligibility under the *Mayo/Alice* framework. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014) (quoting *Bilski*, 561 U.S. at 594). As such, satisfying either prong of that test may integrate an abstract idea into a practical application. *See* 2019 Revised Guidance, 84 Fed. Reg. at 55 nn.27–28 (citing MPEP § 2106.05(b), (c)).

At the same time, however, it is well settled that “whether a [recited] device is ‘a tangible system (in § 101 terms, a ‘machine’)’ is not dispositive.” *ChargePoint, Inc. v. SemaConnect, Inc.*, 920 F.3d 759, 770 (Fed. Cir. 2019) (quoting *Alice Corp.*, 573 U.S. at 224). For a machine to impose a meaningful limit on the claimed invention, it must play a significant part in permitting a claimed method to be performed, rather than merely providing the generic environment in which to implement the recited abstract idea. *Cf. Versata Dev. Grp. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015) (explaining that in order for a machine to add significantly more, it must “play a significant part in permitting the claimed method to be performed, rather than function solely as an obvious mechanism for permitting a solution to be achieved more quickly”); *see also* MPEP § 2106.05(b)(II) (citing *Versata*). Here, it is clear from the Specification that the telephone and the IVR system play the latter role, i.e., they merely provide the generic tools for implementing the recited abstract idea.

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<sup>4</sup> Under the machine-or-transformation test, a claimed process is patent eligible if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing. *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008), *aff’d sub nom. Bilski v. Kappos*, 561 U.S. 593 (2010).

Appellant further notes that the claims recite placing a call from an IVR system to the customer and playing back, by the IVR system, the selected mutual trust phrase, i.e., that the system receives an electrical signal in the form of the mutual trust phrase and sends a signal through a telephone network, using the IVR system, where the signal is transformed into a sound wave (Appeal Br. 14). Appellant argues that the claims, thus, recite “a transformation of a particular thing ([an] electrical data signal) to different state or thing ([an] audible sound wave), which has been identified as constituting significantly more than an alleged abstract idea” (*id.*). But, that argument is not persuasive at least because the features that Appellant identifies as amounting to significantly more are part of the abstract idea itself; they are not additional elements to be considered when determining whether claim 1 includes additional elements or a combination of elements that is sufficient to amount to significantly more than the judicial exception.

It could not be clearer from *Alice*, that under step two of the *Mayo/Alice* framework, the elements of each claim are considered both individually and “as an ordered combination” to determine whether the additional elements, i.e., the elements *other* than the abstract idea itself, “transform the nature of the claim” into a patent-eligible application. *Alice Corp.*, 573 U.S. at 217 (internal quotations and citation omitted); *see Mayo*, 566 U.S. at 72–73 (requiring that “a process that focuses upon the use of a natural law also contain *other* elements or a combination of elements, sometimes referred to as an ‘inventive concept,’ sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself” (emphasis added) (internal citation omitted)).

In other words, the inventive concept under step two of the *Mayo/Alice* test cannot be the abstract idea itself:

It is clear from *Mayo* that the “inventive concept” cannot be the abstract idea itself, and *Berkheimer* . . . leave[s] untouched the numerous cases from this court which have held claims ineligible because the only alleged “inventive concept” is the abstract idea. *Berkheimer v. HP, Inc.*, 890 F.3d 1369, 1374 (Fed. Cir. 2018) (Moore, J., concurring); *see also BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) (“It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.”) (internal citation omitted).

The Examiner determined here, and we agree, that the only claim elements beyond the abstract idea are the “processing system”; “interactive voice response (IVR) system”; and “telephone,” i.e., generic components (Non-Final Act. 5) — a determination amply supported by, and fully consistent with the Specification (*see, e.g.*, Spec. ¶¶ 36–40, 46–52).<sup>5</sup> Appellant cannot reasonably deny that the operation of these components is well-understood, routine, or conventional, where, as here, there is nothing in

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<sup>5</sup> The Office’s April 19, 2018 Memorandum to the Examining Corps from Deputy Commissioner for Patent Examination Policy, Robert W. Bahr, entitled Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*), available at <https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF>, expressly directs that an examiner may support the position that an additional element (or combination of elements) is not well-understood, routine or conventional with “[a] citation to an express statement in the specification . . . that demonstrates the well-understood, routine, conventional nature of the additional element(s)” (*id.* at 3).

the Specification to indicate that the operations recited in claim 1 require any specialized hardware or inventive computer components, invoke any assertedly inventive software, or that the claimed invention is implemented using other than generic components operating in their normal, routine, and ordinary capacity.

Appellant also misapprehends the controlling precedent to the extent Appellant maintains that claim 1 is patent eligible “as evidenced by the lack of a rejection under § 102 or § 103” (Appeal Br. 11; *see also id.* at 14–15). Neither a finding of novelty nor a non-obviousness determination automatically leads to the conclusion that the claimed subject matter is patent eligible. Although the second step in the *Mayo/Alice* 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 Corp.*, 573 U.S. at 217–18 (citation omitted). “Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry.” *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013). A novel and non-obvious claim directed to a purely abstract idea is, nonetheless, patent ineligible. *See Mayo*, 566 U.S. at 90; *see also Diamond v. Diehr*, 450 U.S. 175, 188–89 (1981) (“The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter.”).

Responding to the Examiner’s Answer, Appellant asserts in the Reply Brief that the present claims are similar to claim 2 of Example 35 of the December 2016 Update (Reply Br. 6–9 (referring to the USPTO’s “Subject Matter Eligibility Examples: Business Methods”<sup>6</sup> issued December 15, 2016 (the “2016 Guidance”)). And Appellant argues that the claims are patent eligible because, like claim 2, the claims provide “a unique combination of steps that operate to remotely enroll customers in a secure manner while eliminating the need for secure PIN entry devices and magnetic stripe readers” (*id.* at 7).

Hypothetical claim 2 of Example 35<sup>7</sup> recites a method of conducting a secure automated teller machine (“ATM”) transaction with a financial

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<sup>6</sup> Available at <https://www.uspto.gov/sites/default/files/documents/ieg-bus-meth-exs-dec2016.pdf>.

<sup>7</sup> Claim 2 reads:

2. A method of conducting a secure automated teller transaction with a financial institution by authenticating a customer’s identity, comprising the steps of:
  - obtaining customer-specific information from a bank card,
  - comparing, by a processor, the obtained customer-specific information with customer information from the financial institution to verify the customer’s identity, by
    - generating a random code and transmitting it to a mobile communication device that is registered to the customer associated with the bank card,
    - reading, by the automated teller machine, an image from the customer’s mobile communication device that is generated in response to receipt of the random code, wherein the image includes encrypted code data,
    - decrypting the code data from the read image, and
    - analyzing the decrypted code data from the read image and the generated code to determine if the decrypted code data from the read image matches the generated code data, and

institution by authenticating a customer's identity comprising: (1) obtaining customer-specific information from a bank card; (2) comparing the customer-specific information with information from the financial institution; and (3) allowing the ATM transaction to proceed when a match from the comparison verifies the authenticity of the customer's identity. The claim further recites that the comparison is performed by: (a) generating a random code and transmitting the code to a mobile communication device registered to the customer associated with the bank card; (b) reading, by the ATM, an image including encrypted code data, generated by the mobile device in response to receipt of the random code; (c) decrypting the code data from the read image; and (d) analyzing the decrypted code data to determine if the decrypted code data match the generated code. Only if the code data match the generated code is the transaction allowed to continue in conventional fashion with the customer entering a PIN using the keypad. Otherwise, the keypad is locked. Because the authentication process is performed before entering a PIN, the method prevents skimming and other techniques employed to fraudulently obtain a customer's PIN.

The Guidance determines that claim 2 is patent eligible because the combination of steps (e.g., the ATM providing the random code, the mobile 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) "operates in a nonconventional and

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determining whether the transaction should proceed when a match from the analysis verifies the authenticity of the customer's identity.

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.” 2016 Guidance 10. The Guidance explains that these steps “do not represent merely gathering data for comparison or security purposes, but instead set up a sequence of events that address[es] unique problems associated with bank cards and ATMs (*e.g.*, the use of stolen or ‘skimmed’ bank cards and/or customer information to perform unauthorized transactions)”; the Guidance also likens claim 2 to the claims held patent eligible in *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) because “the claimed combination of additional elements presents a specific, discrete implementation of the abstract idea.” *Id.* The Guidance further explains that “the combination of obtaining information from the mobile communication device (instead of the ATM keypad) and using the image (instead of a PIN) to verify the customer’s identity” describes a process that “differs from the routine and conventional sequence of events normally conducted by ATM verification, such as entering a PIN, similar to the unconventional sequence of events in *DDR [Holdings]*.” *Id.* Therefore, according to the Guidance, “[t]he additional elements in claim 2 . . . represent significantly more (*i.e.*, provide an inventive concept) because they are a practical implementation of the abstract idea of fraud prevention that performs identity verification in a non-conventional and non-generic way.” *Id.*

Appellant argues here that, like claim 2 of Example 35 and the patent-eligible claims in *BASCOM*, “the additional elements in the present claims represent significantly more (*i.e.*, provide an inventive concept) because they are a practical implementation of the abstract idea of fraud prevention that

performs identity verification in a non-conventional and non-generic way, even if the steps use well-known components (a processing system and an IVR system)” (Reply Br. 8). Yet, unlike the situation in *BASCOM*, where the court held that the second step of the *Mayo/Alice* framework was satisfied because the claimed invention “represents a ‘software-based invention[ ] that improve[s] the performance of the computer system itself”” *BASCOM*, 827 F.3d at 135, Appellant’s claim 1 does not improve an existing technological process (e.g., it does not improve the performance of a computer system itself).

We also are not persuaded that the method recited in claim 1 (which, unlike hypothetical claim 2, merely involves a sequence of gathering data, including a PIN, for comparison purposes, albeit without the use of a secure PIN-entry device) materially differs, as does claim 2 of Example 35 (by avoiding the entry of a PIN until after the authentication process has been completed), from the routine and conventional sequence of events normally conducted by PIN entry verification. Rather than paralleling hypothetical claim 2, Appellant’s claim 1, in our view, is akin to hypothetical claim 1 of Example 35, which the Guidance determines is patent ineligible, i.e., it merely involves gathering information from a customer for comparing with stored customer information to, thus, authenticate the customer’s identity.

We are not persuaded, on the present record, that the Examiner erred in rejecting independent claim 1 under 35 U.S.C. § 101. Therefore, we sustain the Examiner’s rejection of independent claim 1, and claims 2–18, which fall with claim 1.

CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1-18	101	Eligibility	1-18	

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