



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/883,835	10/15/2015	Steve Hubbard	P02035-US- UTIL (M01.360)	1012
125619	7590	08/19/2020	EXAMINER	
Mastercard International Incorporated c/o Buckley, Maschoff & Talwalkar LLC 50 Locust Avenue New Canaan, CT 06840			NORMAN, SAMICA L	
			ART UNIT	PAPER NUMBER
			3697	
			NOTIFICATION DATE	DELIVERY MODE
			08/19/2020	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

colabella@bmtpatent.com  
martin@bmtpatent.com  
szpara@bmtpatent.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* STEVE HUBBARD and SHERYL J. LOCK

---

Appeal 2019-005915  
Application 14/883,835  
Technology Center 3600

---

Before KALYAN K. DESHPANDE, CHARLES J. BOUDREAU, and  
SHARON FENICK, *Administrative Patent Judges*.

FENICK, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 1–17. We have jurisdiction under 35 U.S.C. § 6(b)(1).

We AFFIRM.

---

<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies Mastercard International Incorporated as the real party in interest. Appeal Br. 2.

CLAIMED SUBJECT MATTER

Appellant's invention relates to cardholder authentication during online transactions. *See* Spec. 1:2–10.

Claims 1 and 10 are independent. Claim 1, reproduced below, is illustrative of the subject matter on appeal:

1. A method for authorizing an online purchase transaction, comprising:

receiving, by a merchant plug-in (MPI) application of a merchant server computer from an issuer access control server (ACS) during an online transaction, a cardholder authentication message comprising an enhanced accountholder authentication variable (AAV) indicative of a type of cardholder authentication;

transmitting, by the MPI application to a payment gateway server computer, a purchase transaction authorization request message including cardholder data, purchase transaction data and the enhanced AAV;

receiving, by the MPI application from the payment gateway server computer, a purchase transaction authorization response message, wherein the purchase transaction authorization response message comprises one of a transaction authorization message or a transaction denied message;

displaying, by the merchant server computer on a merchant webpage, the purchase transaction authorization response message; and

storing, by the MPI application in an MPI database, the purchase transaction authorization response message and the enhanced AAV in association with the cardholder data.

Appeal Br. 24 (Claims Appendix).

## REJECTION

Claims 1–17 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Final Act. 2–9; Ans. 3–4.

## OPINION

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter, or [a] new and useful improvement thereof.” 35 U.S.C. § 101. However, the U.S. Supreme Court has long interpreted § 101 to “contain[] an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)).

In *Alice*, the Supreme Court reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 75–77 (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*, 573 U.S. at 217. The first step in this analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts,” e.g., to an abstract idea. *Id.* Concepts determined to be abstract ideas include certain methods of organizing human activity, such as fundamental economic practices or commercial interactions (*id.* at 219–20; *Bilski v. Kappos*, 561 U.S. 593, 611 (2010); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014)); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). If it is determined that the claims are directed to a patent-

ineligible concept, the second step of the analysis requires consideration of the elements of the claims “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.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78, 79). “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.* at 221 (alterations in original) (quoting *Mayo*, 566 U.S. at 77). In other words, the claims must contain an “inventive concept,” or some element or combination of elements “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [abstract idea] itself.” *Id.* at 217–18 (quoting *Mayo*, 566 U.S. at 72–73). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.* at 221.

In January 2019, the PTO published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Revised Guidance”).<sup>2</sup> “All USPTO personnel are, as a matter of internal agency management, expected to follow the guidance.” *Id.* at 51; *see also* October 2019 Update at 1. Consistent with<sup>3</sup> that guidance, we first look to whether the claim recites:

---

<sup>2</sup> In October 2019, in response to received public comments, the PTO issued a further memorandum clarifying the Revised Guidance. USPTO Memorandum, October 2019 Update: Subject Matter Eligibility (Oct. 17, 2019), 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) (“October 2019 Update”).

<sup>3</sup> Our reviewing court has explained that the Revised Guidance “cannot modify or supplant the Supreme Court’s law regarding patent eligibility, or

- (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as fundamental economic practices, or mental processes) (“Step 2A, Prong 1”); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018)) (“Step 2A, Prong 2”).<sup>4</sup>

*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 (under “Step 2B”) look to whether the claim:

- (3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, and 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.

The Examiner determines that “[t]he claimed concept of using a cardholder authentication message and a purchase transaction authorization

---

[our reviewing court’s] interpretation and application thereof.” *In re Rudy*, 956 F.3d 1379, 1383 (Fed. Cir. 2020). Our decision is based upon applicable statutory authority and precedent of the United States Supreme Court and Court of Appeals for the Federal Circuit and applies the analytical framework set forth in the Revised Guidance in a manner consistent with authority and precedent.

<sup>4</sup> This evaluation is performed by (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception, and (b) evaluating those additional elements individually and in combination to determine whether the claim as a whole integrates the exception into a practical application. *See* Revised Guidance, 84 Fed. Reg. at 54–55 (Section III.A.2).

request message to receive a purchase transaction response message . . . is a fundamental economic practice,” and that the claims thus recite an abstract idea. Ans. 3–4. According to the Examiner, the recited steps are similar to “concepts that have been identified as abstract by the courts, such [as] collecting information, analyzing it, and displaying certain results of the collection and analysis.” Final Act. 3 (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016)). The Examiner further determines that the abstract idea is not integrated into a practical application and that the claims do not include additional elements that are sufficient to amount to significantly more than the abstract idea because the additionally recited elements are computer components “recited at a high level of generality and . . . merely invoked as tools to perform the processes.” Ans. 4; *see also* Final Act. 4 (finding that the additional limitations are well-understood, routine, and conventional).

Appellant argues that the claims are not directed to an abstract idea because they “require a specific structure . . . paired with a prescribed functionality . . . directly related to the structure.” Appeal Br. 20. According to Appellant, the claims “recite a process that solves a technical problem rooted in the field of authorizing online purchase transactions of how to use an enhanced AAV to authorize the online purchase transaction for a customer,” “improv[es] the merchant’s future customer authentication and/or authorization decisions,” and “improv[es] the customer shopping experience.” *Id.*; *see also* Reply Br. 4. Appellant further argues that those improvements are achieved in a manner different from conventional processes, thus amounting to significantly more than an abstract idea. Appeal Br. 21–22; Reply Br. 5. Finally, Appellant argues that “the Office

tacitly admits that the claimed process is patentable because the Examiner . . . has never alleged that the claims are anticipated and/or obvious in view of any prior art.” Appeal Br. 22.

*Step 2A, Prong 1*

We agree with the Examiner that, based on the Revised Guidance, the claims recite a judicial exception, i.e., an abstract idea. *See* Ans. 3–4. In particular, we agree with the Examiner that the claims recite fundamental economic practices in the form of a request for authorization for a purchase transaction and the transaction being authorized or denied. *See id.* We also determine that the claims recite a commercial interaction in the form of a request for authorization for a purchase transaction and the transaction being authorized or denied.

For example, independent claim 1 recites (emphasis added):

*transmitting, by the MPI application to a payment gateway server computer, a purchase transaction authorization request message including cardholder data, purchase transaction data and the enhanced AAV; [and]*

*receiving, by the MPI application from the payment gateway server computer, a purchase transaction authorization response message, wherein the purchase transaction authorization response message comprises one of a transaction authorization message or a transaction denied message.*

In reciting the steps of “transmitting . . . a purchase transaction authorization request message” and “receiving . . . a purchase transaction authorization response message, wherein the purchase transaction authorization response message comprises one of a transaction authorization message or a transaction denied message,” claim 1 recites fundamental economic practices (as does independent claim 10 with corresponding limitations).

Requesting authorization for a purchase transaction and the transaction being



authorized or denied is also a commercial interaction. Thus, these limitations recite certain methods of organizing human activity recognized as abstract ideas. *See* Revised Guidance, 84 Fed. Reg. at 52 (listing fundamental economic practices and commercial interactions as some of the certain methods of organizing human activity identified as abstract ideas).

*Step 2A, Prong 2*

Because the claims recite an abstract idea, we next look to whether the claims recite additional elements that integrate the abstract idea into a practical application. Revised Guidance, 84 Fed. Reg. at 54. Claim limitations that indicate integration into a practical application include additional elements that reflect an improvement in the functioning of a computer, or an improvement to other technology or technical field. *Id.* at 55. When a claim recites a judicial exception and fails to integrate the judicial exception into a practical application, the claim is “directed to” the judicial exception. *Id.* at 51.

We determine that the additional limitations recited in the claims on appeal do not integrate the recited abstract idea into a practical application. For example, claim 1 additionally recites “receiving, by a merchant plug-in (MPI) application of a merchant server computer from an issuer access control server (ACS) during an online transaction, a cardholder authentication message comprising an enhanced accountholder authentication variable (AAV) indicative of a type of cardholder authentication.” This limitation is recited at a high level of generality (i.e., as a general step of gathering data, including the data to be transmitted and stored) and amounts to insignificant pre-solution activity. Claim 1 further recites “displaying, by the merchant server computer on a merchant

webpage, the purchase transaction authorization response message” and “storing, by the MPI application in an MPI database, the purchase transaction authorization response message and the enhanced AAV in association with the cardholder data.” These limitations are recited at a high level of generality (i.e., as a general steps of displaying and storing or saving data) and amount to insignificant post-solution activity. *See Revised Guidance*, 84 Fed. Reg. at 55; MPEP § 2106.05(g).

We agree with the Examiner that the claims otherwise merely recite generic computer components that similarly fail to integrate the recited abstract idea into a practical application. *See Final Act. 2–4; Ans. 4*. For example, independent claim 1 recites a “merchant plug-in (MPI) application,” “merchant server computer,” “issuer access control server (ACS),” “payment gateway server computer,” “merchant webpage,” and “MPI database.” Notwithstanding Appellant’s argument that the claims “require a specific structure . . . paired with a prescribed functionality . . . directly related to the structure” (Appeal Br. 20), these limitations are recited at a high level of generality, i.e., as generic components performing generic computer functions of communication, display, and storage. The claims merely apply the abstract idea using generic computer components and indicate a field of use or technological environment (i.e., Internet). *See Spec. 2:6–19; Revised Guidance*, 84 Fed. Reg. at 55; MPEP § 2106.05(f), (h). The claim limitations do not include any particular machine that is integral to the claim. *See Revised Guidance* at 55; MPEP § 2106.05(b).

Appellant argues that the claims “recite a process that solves a technical problem rooted in the field of authorizing online purchase transactions of how to use an enhanced AAV to authorize the online

purchase transaction for a customer,” “improv[es] the merchant’s future customer authentication and/or authorization decisions,” and “improv[es] the customer shopping experience.” Appeal Br. 20; *see also* Reply Br. 4. We are unpersuaded that the claims recite a technological improvement in addition to the abstract idea. As discussed above, the recited “merchant plug-in (MPI) application,” “merchant server computer,” “issuer access control server (ACS),” “payment gateway server computer,” “merchant webpage,” and “MPI database” are merely generic computer components performing generic functions of communication, display, and storage. These additionally recited elements “do not require an arguably inventive set of components or methods, such as measurement devices or techniques, that would generate new data. They do not invoke any assertedly inventive programming.” *Elec. Power Grp.*, 830 F.3d at 1355. Thus, the claims do not reflect an improvement in computer functionality or to any other technology or technical field. *See* Revised Guidance, 84 Fed. Reg. at 55; MPEP § 2106.05(a).

Even in combination, the additional limitations do not integrate the abstract idea into a practical application because they do not impose any meaningful limits on practicing the abstract idea. Accordingly, we agree with the Examiner that the claims are directed to an abstract idea.

*Step 2B*

Turning to Step 2B of the Revised Guidance, we determine that there are no specific limitations beyond the judicial exception, i.e., the abstract idea, that are not well-understood, routine, and conventional in the field. *See Alice*, 573 U.S. at 225.

We agree with the Examiner that the recitation of additional elements (e.g., “merchant plug-in (MPI) application,” “merchant server computer,” “issuer access control server (ACS),” “payment gateway server computer,” “merchant webpage,” “MPI database”) “simply implement[s] the abstract idea using computer components as tools to perform an abstract idea.”

Ans. 4. The Specification describes generic computer components (application, computer, server, webpage, database) for performing the recited steps, but provides no details or description to indicate that they are anything beyond well-understood, routine, and conventional computer components. *See, e.g.*, Spec. 7:7–30 (merchant server computer, merchant plug-in (MPI) application, issuer access control server (ACS)), 15:22–24 (MPI database), 17:1–4 (payment gateway server computer), 19:13–21 (merchant webpage). Implementation of the abstract idea using generic computer components does not provide an inventive concept to transform the abstract idea into a patent-eligible invention. *See Alice*, 573 U.S. at 223–24.

Reevaluating the extra-solution activity of “receiving, . . . during an online transaction, a cardholder authentication message comprising an enhanced accountholder authentication variable (AAV) indicative of a type of cardholder authentication,” “displaying . . . the purchase transaction authorization response message,” and “storing . . . the purchase transaction authorization response message and the enhanced AAV in association with the cardholder data” (*see* Revised Guidance, 84 Fed. Reg. at 56 (stating that a conclusion under Step 2A that an additional element is insignificant extra-solution activity should be reevaluated in Step 2B)), we find nothing unconventional in these steps of gathering, displaying, and storing data.

Appellant argues that the recited “enhanced AAV provides *improved and/or enhanced information* that can be utilized by issuer financial institutions (FIs) and/or merchants to make improved authentication and/or authorization decisions” (Appeal Br. 17) (emphasis added). The claims describe the “enhanced AAV” as “indicative of a type of cardholder authentication” and merely recite the gathering, transmission, and storing of such information. This is insufficient to transform an abstract idea into patent-eligible subject matter, regardless of the content of the information. *See Elec. Power Grp.*, 830 F.3d at 1354 (“gathering and analyzing information of a specified content . . . and not any particular assertedly inventive technology for performing those functions” is insufficient to transform an abstract idea into patent-eligible subject matter).

Appellant further argues that “the Office tacitly admits that the claimed process is patentable because the Examiner . . . has never alleged that the claims are anticipated and/or obvious in view of an prior art.” Appeal Br. 22. As the Examiner points out, the absence of a prior art rejection does not affect our determination of § 101 patent subject matter eligibility. *See* Ans. 8. Our reviewing court “do[es] not agree . . . that the addition of merely novel or non-routine components to the claimed idea necessarily turns an abstraction into something concrete.” *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014).

Appellant has not shown that the claims on appeal recite any additional limitations beyond the judicial exception that are not well-understood, routine, and conventional in the field. Furthermore, we are unpersuaded that the ordered combination is unconventional or amounts to

significantly more than the abstract idea to which the claims are otherwise directed.

Accordingly, considering the claim elements individually and as an ordered combination, we agree with the Examiner that there are no meaningful claim limitations that represent sufficiently inventive concepts to transform the nature of the claims into a patent-eligible application of the abstract idea.

For the foregoing reasons, we sustain the Examiner's rejection of claims 1–17 under 35 U.S.C. § 101.

#### CONCLUSION

The Examiner's rejection of claims 1–17 under 35 U.S.C. § 101 is affirmed.

#### DECISION SUMMARY

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–17	101	Eligibility	1–17	

#### 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)(1)(iv).

AFFIRMED