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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte COLIN TANNER, MICHAEL J. COWEN, and
JAMES D. SINTON

Appeal 2018-003708
Application 13/372,907
Technology Center 3600

Before JOSEPH L. DIXON, JAMES W. DEJMEK, and
STEPHEN E. BELISLE, *Administrative Patent Judges*.

DEJMEK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ appeals under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–24. We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We affirm.

¹ Throughout this Decision, we use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42 (2016). Appellant identifies the real party in interest as MasterCard International Incorporated. App. Br. 3.

STATEMENT OF THE CASE

Introduction

Appellant's disclosed and claimed invention generally relates to "provid[ing] a mechanism to allow the use of disposable cards on a system designed to accept cards confirming [(sic: conforming)] to the standards of the global payments industry." Spec. 2:2–4. According to the Specification, the disposable cards may be considered a reduced-functionality payment device in the sense that they may be limited to a set of fixed commands and are not programmable to respond to other commands. Spec. 19:24–20:11. In addition, the reduced-functionality payment devices (i.e., cards) are not able to be configured to hold a secret for use in full-functionality payment systems that conform, for instance, to the EMV (Europay, MasterCard, and Visa) standards. Spec. 19:24–20:11. In order for the reduced-functionality cards to be used on a full-functionality payment systems network, a card reader "performs a simple translation" such that the cards "can be handled the same way as if they were a credit, debit or prepaid card conforming to the standards of the global payments industry." Spec. 19:8–13.

Claim 1 is exemplary of the subject matter on appeal and is reproduced below with the disputed limitation emphasized in *italics*:

1. A method comprising the steps of:

obtaining, by at least one processor at a terminal assembly associated with a physical access point, payment device data *from a reduced-functionality payment device*;

said at least one processor identifying said payment device data as emanating from said reduced-functionality payment device;

responsive to said identifying step, said at least one processor converting said payment device data emanating from

said reduced-functionality payment device into one of an authorization request and an access request, said one of an authorization request and an access request being of a format consistent with full-functionality payment devices; and

said at least one processor dispatching said one of an authorization request and an access request into a payment infrastructure which is configured to handle said one of an authorization request and an access request of said format consistent with said full-functionality payment devices, but is not configured to handle said reduced-functionality payment device.

The Examiner's Rejections

1. Claims 1–24 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 2–4.

2. Claims 1–24 stand rejected under pre-AIA 35 U.S.C. § 102(e) as being anticipated by Dixon et al. (US 2011/0166914 A1; July 7, 2011). Final Act. 5–9.

ANALYSIS²

Rejection under 35 U.S.C. § 101

Appellant disputes the Examiner's conclusion that the pending claims are directed to patent-ineligible subject matter. App. Br. 13–30; Reply Br. 2–16. In particular, Appellant argues the Examiner oversimplifies the claims by concluding the steps of obtaining, identifying, and dispatching information to conduct financial transactions from a payment device are

² Throughout this Decision, we have considered the Appeal Brief, filed August 11, 2017 (“App. Br.”); the Reply Brief, filed February 20, 2018 (“Reply Br.”); the Examiner's Answer, mailed December 20, 2017 (“Ans.”); and the Final Office Action, mailed January 11, 2017 (“Final Act.”), from which this Appeal is taken.

“fundamental economic practices and thus directed to an abstract idea.” App. Br. 13–18; Reply Br. 2–4. Rather, Appellant asserts the Examiner ignores the limitation of converting the payment device data from a reduced-functionality payment device into a format consistent with full-functionality payment devices and that this represents a “significant technological improvement,” i.e., providing an inventive concept. App. Br. 13–18, 24. In addition, Appellant asserts the dependent claims (e.g., claims 10–16) recite the reduced-functionality payment device is a card—“a tangible physical object,” and, therefore, the claims could not be performed entirely in a human’s mind. App. Br. 27–30 (citing *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1376 (Fed. Cir. 2011)).

The Supreme Court’s two-step framework guides our analysis of patent eligibility under 35 U.S.C. § 101. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014). In addition, the Office recently published revised guidance for evaluating subject matter eligibility under 35 U.S.C. § 101, specifically with respect to applying the *Alice* framework. USPTO, 2019 *Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Office Guidance”). If a claim falls within one of the statutory categories of patent eligibility (i.e., a process, machine, manufacture, or composition of matter) then the first inquiry is whether the claim is directed to one of the judicially recognized exceptions (i.e., a law of nature, a natural phenomenon, or an abstract idea). *Alice*, 573 U.S. at 217. As part of this inquiry, we must “look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.” *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016). Per Office Guidance, this first inquiry has two

prongs of analysis (i) does the claim recite a judicial exception (e.g., an abstract idea), and (ii) if so, is the judicial exception integrated into a practical application. 84 Fed. Reg. at 54. Under the Office Guidance, if the judicial exception is integrated into a practical application, *see infra*, the claim is patent eligible under § 101. 84 Fed. Reg. at 54–55. If the claim is directed to a judicial exception (i.e., recites a judicial exception and does not integrate the exception into a practical application), the next step is to determine whether any element, or combination of elements, amounts to significantly more than the judicial exception. *Alice*, 573 U.S. at 217; 84 Fed. Reg. at 56.

Here, we conclude Appellant’s claims recite an abstract idea because they recite mental processes. If a claim, under its broadest reasonable interpretation, covers performance in the mind but for the recitation of generic computer components, then it is still in the mental processes category unless the claim cannot practically be performed in the mind. *See Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016) (“[W]ith the exception of generic computer-implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper.”); *see also CyberSource Corp.*, 654 F.3d at 1375, 1372 (holding that the incidental use of “computer” or “computer readable medium” does not make a claim otherwise directed to process that “can be performed in the human mind, or by a human using a pen and paper” patent eligible); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012) (explaining mental processes are not patentable); 84 Fed. Reg. at 52–53 nn.14–15.

More specifically, Appellant’s claims generally are directed to converting data from one format to another format in the context of an electronic payment transaction. This is consistent with how Appellant describes the claimed invention. *See* Spec. 1:6–7 (describing the invention relates to “electronic payment”); *see also* Spec. 2:2–4 (describing the principles of the invention “provide a mechanism to allow the use of disposable cards on a system designed to accept cards confirming [(sic: conforming)] to the standards of the global payments industry”); Spec. 19:8–12 (describing performing a “simple translation” to allow reduced functionality cards to be handled the same way as if they were a fully-functional card). Consistent with our Guidance and case law, we conclude that converting data from one format to another format is a mental process and, therefore, an abstract idea. *See* 84 Fed. Reg. at 52; *Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1367 (Fed. Cir. 2019) (concluding claims to collecting physiologic data from disparate medical devices, converting the data to a common format, analyzing the data, and displaying the data were directed to an abstract idea); *see also Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (explaining that “analyzing information by steps people go through in their minds” is a mental process within the abstract idea category and concluding claims directed to “collecting information, analyzing it, and displaying certain results of the collection and analysis” were abstract); *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017) (concluding claims that focused on collecting, displaying and manipulating data were directed to an abstract idea).

Also, although not binding on us, we note that other courts have also concluded that translating data into a new form is an abstract idea. *See Novo Transforma Techs. LLC v. Sprint Spectrum, L.P.*, 669 F. App'x 555 (Fed. Cir. 2016) (unpublished per curiam mem.) (affirming district court's grant of summary judgment of invalidity of the patent as being directed to patent-ineligible subject matter that was directed to nothing more than the abstract idea of translation of data from one format to another); *Broadband iTV, Inc. v. Hawaiian Telcom, Inc.*, 669 F. App'x 555 (Fed. Cir. 2016) (unpublished per curiam mem.) (affirming district court's grant of summary judgment of invalidity of patent as being directed to patent-ineligible subject matter that was directed to nothing more than the abstract idea of translation of a data from one format to another); *see also Yodlee, Inc. v. Plaid Techs. Inc.*, Civil Action No. 14-1445-LPS, 2016 WL 2982503, at *25 (D. Del. May 23, 2016) (finding claims directed to an abstract idea because they are "focused on the idea of translating data into a new form, but they say almost nothing about how that translation must occur" (emphasis omitted)).

Claim 1 is reproduced below with the claim limitations that recite converting data from one format to another format in the context of an electronic payment transaction in *italics*:

1. A method comprising the steps of:
 - obtaining, by at least one processor at a terminal assembly associated with a physical access point, payment device data from a reduced-functionality payment device;
 - said at least one processor *identifying said payment device data as emanating from said reduced-functionality payment device*;
 - responsive to said identifying step*, said at least one processor *converting said payment device data emanating from*

said reduced-functionality payment device into one of an authorization request and an access request, said one of an authorization request and an access request being of a format consistent with full-functionality payment devices; and

said at least one processor dispatching said one of an authorization request and an access request into a payment infrastructure which is configured to handle said one of an authorization request and an access request of said format consistent with said full-functionality payment devices, but is not configured to handle said reduced-functionality payment device.

More particularly, the concept of converting data from one format to another format in the context of an electronic payment transaction comprises (i) determining whether to translate the received data (i.e., the claimed step of identifying the data as emanating from a reduced-functionality payment device); and (ii) converting the received data to the desired format (i.e., the claimed step of converting the data from a reduced-functionality payment device to a format consistent with full-functionality payment devices).

Because the claim recites a judicial exception, we next determine whether the claim integrates the judicial exception into a practical application. 84 Fed. Reg. at 54. To determine whether the judicial exception is integrated into a practical application, we identify whether there are “*any additional elements recited in the claim beyond the judicial exception(s)*” and evaluate those elements to determine whether they integrate the judicial exception into a practical application. 84 Fed. Reg. at 54–55 (emphasis added); *see also* Manual of Patent Examining Procedure (“MPEP”) § 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018).

Here, we find the additional limitation(s) do not integrate the judicial exception into a practical application. More particularly, the claims do not recite (i) an improvement to the functionality of a computer or other

technology or technical field (*see* MPEP § 2106.05(a)); (ii) a “particular machine” to apply or use the judicial exception (*see* MPEP § 2106.05(b)); (iii) a particular transformation of an article to a different thing or state (*see* MPEP § 2106.05(c)); or (iv) any other meaningful limitation (*see* MPEP § 2106.05(e)). *See* 84 Fed. Reg. at 55. Rather, the steps of obtaining (i.e., receiving) payment device data from a reduced-functionality payment device and dispatching the converted data from a terminal into a payment infrastructure (i.e., sending or transmitting data over a network) are the type of extra-solution activities (i.e., in addition to the judicial exception) the courts have determined insufficient to transform judicially excepted subject matter into a patent-eligible application. *See* MPEP § 2106.05(g); *see also Bilski v. Kappos*, 561 U.S. 593, 612 (2010) (holding the use of well-known techniques to establish inputs to the abstract idea as extra-solution activity that fails to make the underlying concept patent eligible); *Elec. Power*, 830 F.3d at 1355 (explaining that “selecting information, by content or source, for collection analysis, and display does nothing significant to differentiate a process from ordinary mental processes”); *Elec. Power*, 830 F.3d at 1354 (recognizing “that merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis”); *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Can.*, 771 F.Supp.2d 1054, 1065 (E.D. Mo. 2011) *aff’d*, 687 F.3d 1266 (Fed. Cir. 2012) (explaining that “storing, retrieving, and providing data . . . are inconsequential data gathering and insignificant post solution activity”).

Contrary to Appellant’s arguments (*see, e.g.*, App. Br. 18), the claims are not directed to a technological improvement of the payment infrastructure. Rather, the claims do not recite any change to the existing payment infrastructure. The purported improvement (allowing the use of reduced-functionality payment devices within a full-functionality payment infrastructure), however, relates to the abstract idea, and does not improve a computer, technology, or a technical field. *See McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (“We . . . look to whether the claims in these patents focus on a specific means or method 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.”) (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016)).

Further, to the extent Appellant argues that certain dependent claims recite interaction with a tangible, physical object (e.g., a payment card or operating a physical barrier) and cannot, therefore, be performed entirely in the human mind (*see* App. Br. 28–30), we are not persuaded of Examiner error. Eligibility does not depend on whether the claimed subject is concrete or physical. If that were the case, which it is not, all claims reciting a computer would necessarily be patent eligible. *See Alice*, 573 U.S. at 224 (explaining that a computer’s existence in the physical rather than conceptual realm is not relevant to the analysis).

Additionally, that the conversion of data is from a reduced-functionality payment device to a format consistent with full-functionality payment devices and is dispatched into a payment infrastructure does not confer patent eligibility to the claims. *See, e.g., Affinity Labs*, 838 F.3d at

1259 (explaining the additional limitations merely confined the abstract idea to a particular technological environment and failed to add an inventive concept to the claims); *see also* MPEP § 2106.05(h).

For at least the foregoing reasons, the claims do not integrate the judicial exception into a practical application.

Because we determine the claims are directed to an abstract idea or combination of abstract ideas, we analyze the claims under step two of *Alice* to determine if there are additional limitations that individually, or as an ordered combination, ensure the claims amount to “significantly more” than the abstract idea. *Alice*, 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 72–73, 77–79). As stated in the Office Guidance, many of the considerations to determine whether the claims amount to “significantly more” under step two of the *Alice* framework are already considered as part of determining whether the judicial exception has been integrated into a practical application. 84 Fed. Reg. at 56. Thus, at this point of our analysis, we determine if the claims add a specific limitation, or combination of limitations, that is not well-understood, routine, conventional activity in the field, or simply appends well-understood, routine, conventional activities at a high level of generality. 84 Fed. Reg. at 56.

Here, Appellant’s claims do not recite specific limitations (or a combination of limitations) that are not well-understood, routine, and conventional. Receiving or sending information (e.g., payment data such as an authorization request and access request) merely requires the well understood function of a computer/computer network. *See buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (“That a computer receives and sends the information over a network—with no further

specification—is not even arguably inventive.”). In addition, we note Appellant describes the the components of the claimed invention at a high level of generality and the components perform generic functions that are well-understood, routine, and conventional. *See* Spec. 41:29–45:20, Fig. 9

Additionally, to the extent Appellant contends the claims do not seek to tie-up (i.e., preempt) an abstract idea (*see* App. Br. 24–25), we are unpersuaded of Examiner error. “[W]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.” *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1098 (Fed. Cir. 2016) (quoting *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015)); *see also OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) (“[T]hat the claims do not preempt all price optimization or may be limited to price optimization in the e-commerce setting do not make them any less abstract.”). Further, “[w]here a patent’s claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot.” *Ariosa*, 788 F.3d at 1379.

For the reasons discussed *supra*, we are unpersuaded of Examiner error. Accordingly, we sustain the Examiner’s rejection of claims 1–24 under 35 U.S.C. § 101.

Rejection under pre-AIA 35 U.S.C. § 102(e)

Appellant disputes the Examiner’s findings that Dixon discloses obtaining payment device data *from a reduced-functionality payment device*, as recited in claim 1. App. Br. 34–35; Reply Br. 16–17. In particular, rather

than a reduced-functionality payment device, Appellant asserts the Examiner finds Dixon's NFC-enabled mobile device discloses a reduced-functionality payment device. App. Br. 34–35; Reply Br. 16–17. Appellant argues Dixon describes the NFC-enabled mobile device does not have reduced functionality as compared to a reloadable prepaid card, which the Examiner maps to the claimed full-functionality payment device. App. Br. 34–35. Rather, Appellant asserts Dixon describes the NFC-enabled mobile device as having functionality *in addition to* the functions of the reloadable prepaid card. App. Br. 35 (citing Dixon ¶¶ 51–52, 75, 93).

Dixon generally relates to the enablement of reloadable prepaid cards for use at access points within a transit system. Dixon ¶ 5. Dixon describes the reloadable prepaid cards as payment devices used in closed systems available at certain retailers. Dixon ¶¶ 3–4. Further, Dixon discloses “[t]ransit systems typically utilize fare media having a value amount stored on the fare media rather than a value associated with a prepaid account.” Dixon ¶ 4. In contrast to Appellant's claims that converts data from a reduced-functionality payment device to a format consistent with that of a full-functionality payment device, Dixon describes using a payment device with greater functionality in a system that operates with less functionality from a payment system perspective. More specifically, as noted by Appellant, the Examiner maps Dixon's NFC-enabled mobile device to the claimed reduced-functionality payment device. *See* Final Act. 5 (citing Dixon ¶ 80). Thus, rather than a reduced-functionality device, Dixon describes the NFC-enabled mobile device as including additional functionality such as account management, communication with a central ticketing system, and “additional functionality.” Dixon ¶¶ 51–52, 75, 93.

Moreover, the Examiner’s response that “[i]t should be clear that the reloadable prepaid card can be used as fare media in the transit system as payment for transit fares as well as for purchases at locations outside the transit system,” fails to address Appellant’s arguments that Dixon’s NFC-enabled mobile device is not a reduced-functionality payment device as compared to the reloadable prepaid payment card.

For the reasons discussed *supra*, we are persuaded of Examiner error. Accordingly, we do not sustain the Examiner’s rejection under pre-AIA 35 U.S.C. § 102(e) of independent claim 1. For similar reasons, we do not sustain the rejection of independent claims 22 and 24, which recite commensurate limitations. Further, we do not sustain the Examiner’s rejection under pre-AIA 35 U.S.C. § 102(e) of claims 2–21 and 23, which depend directly or indirectly therefrom.

DECISION

Claims Rejected	Basis	Affirmed	Reversed
1–24	35 U.S.C. § 101	1–24	
1–24	Pre-AIA 35 U.S.C. § 102(e)		1–24
Overall Outcome		1–24	

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. § 41.50(f).

AFFIRMED