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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PATRICK FAITH and AYMAN HAMMAD

Appeal 2017-004510
Application 13/919,900¹
Technology Center 3600

Before LARRY J. HUME, AARON W. MOORE, and
DAVID J. CUTITTA II, *Administrative Patent Judges*.

Opinion for the Board filed by HUME, *Administrative Patent Judge*.

Opinion Concurring filed by CUTITTA, *Administrative Patent Judge*.

HUME, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final Rejection of claims 9, 10, 21–27, and 30–41. Appellants have canceled claims 1–8, 11–20, 28, and 29. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ According to Appellants, the real party in interest is Visa International Service Association. App. Br. 3.

STATEMENT OF THE CASE²

The Invention

Appellants' disclosed embodiments and claimed invention "are directed to methods, computer readable medium, and systems for conducting a transaction." Spec. ¶ 10.

Exemplary Claim

Claims 9 and 21, reproduced below, are illustrative of the subject matter on appeal:

9. A method for conducting a transaction, comprising:

generating, by a portable consumer device, a verification value in response to a transaction involving an access device;

sending, by the portable consumer device, the verification value and a portion of a first dynamic data element to the access device, the portion of the first dynamic data element including data included in a fixed position of the first dynamic data element, the verification value being different from the portion of the first dynamic data element; and

communicating, by the access device, the verification value and the portion of the first dynamic data element to a service provider computer;

wherein the service provider computer determines a plurality of candidate dynamic data elements using the portion of the first dynamic data element in response to determining that the verification value does not match a second verification value independently generated by the service provider

² Our decision relies upon Appellants' Appeal Brief ("App. Br.," filed July 22, 2016); Reply Brief ("Reply Br.," filed Jan. 17, 2017); Examiner's Answer ("Ans.," mailed Nov. 21, 2016); Final Office Action ("Final Act.," mailed Feb. 25, 2016); and the original Specification ("Spec.," filed June 17, 2013).

computer, determines a plurality of candidate verification values from the plurality of candidate dynamic data elements, and determines whether the verification value matches any of the plurality of candidate verification values;

wherein, each of the plurality of candidate verification values is unique to a corresponding candidate dynamic data element of the plurality of candidate dynamic data elements; and

wherein the transaction is thereafter authenticated when the verification value matches any of the plurality of candidate verification values.

21. A system comprising:

a database; and

a server coupled to the database and operable to:

receive a verification value and a portion of a dynamic data element, the portion of the dynamic data element including data located within a fixed position of the dynamic data element;

determine that the verification value does not match an expected value, the expected value stored at the system;

upon determining that the verification value does not match an expected value, determine a plurality of candidate dynamic data elements using the portion of the dynamic data element;

calculate a plurality of candidate verification values using the plurality of candidate dynamic data elements;

determine if the received verification value matches any of the plurality of candidate verification values; and

if the received verification value matches any of the plurality of candidate verification values, store the candidate dynamic data element

associated with the matching candidate verification value,

wherein the transaction is thereafter authenticated when the received verification value matches any of the plurality of candidate verification values.

Rejection on Appeal³

Claims 9, 10, 21–27, and 30–41 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 3; Ans. 2.

ISSUE

Appellants argue (App. Br. 4–14; Reply Br. 2–5) the Examiner's rejection of independent claims 9 and 21 and claims depending therefrom under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter is in error. These contentions present us with the following issue:

Did the Examiner err in concluding claims 9 and 21 are not directed to significantly more than an underlying abstract idea and are therefore patent-ineligible under § 101?

ANALYSIS

We agree with particular arguments advanced by Appellants with respect to claims 9, 10, 21–27, and 30–41 for the specific reasons discussed below. We highlight and address specific findings and arguments regarding claims 9 and 21 for emphasis as follows.

³ In the event of further prosecution of this application, we invite the Examiner's attention to the recitation of "the transaction" in the final wherein clause of claim 21 to determine whether this claim term has antecedent basis sufficient to meet the definiteness requirements of pre-AIA 35 U.S.C. § 112, second paragraph.

The Claims are Directed to an Abstract Idea

Appellants first contend the Examiner did not demonstrate the claims are directed to an abstract idea, and specifically argue "the Office has not identified the judicial exception recited in the claim, nor has the Office explained why it is considered an exception." App. Br. 5. Along these lines, Appellants further argue:

[T]he Office has not made a *prima facie* case required for an eligibility rejection because the Office has failed to: clearly articulate why the claims are directed to a fundamental economic practice as required by Step 2A of the Alice Test and clearly articulate why the claims do not amount to significantly more as required by Step 2B of the Alice Test.

App. Br. 6.

Appellants also allege the Examiner has oversimplified and mischaracterized the claims on appeal by construing the claimed invention "as an economic practice, organizing human activities, an idea of itself and/or mathematical relationships/formulas. Conducting a transaction is an economic practice and can also be organizing human activities such as buying, selling, paying for bought item, etc." App. Br. 9 (quoting Final Act. 2, 4). Appellants argue this construction is an oversimplification because it "ignores most of the features of the independent claims." App. Br. 9.

The Supreme Court's two-part *Mayo/Alice* framework guides us in distinguishing between patent claims that impermissibly claim the "building blocks of human ingenuity" and those that "integrate the building blocks into something more." *Alice Corp. Pty Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014). First, we "determine whether the claims at issue are directed to

a patent-ineligible concept." *Id.* at 2355. If so, we "examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Id.* at 2357 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1294, 1298 (2012)). While the two steps⁴ of the *Alice* framework are related, the "Supreme Court's formulation makes clear that the first-stage filter is a meaningful one, sometimes ending the § 101 inquiry." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). We note the Supreme Court "has not established a definitive rule to determine what constitutes an 'abstract idea'" for the purposes of step one. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016) (citing *Alice*, 134 S. Ct at 2357).

We agree with the Examiner (Final Act. 2,⁵ 4⁶; Ans. 3⁷) that the claims, e.g., claims 9 and 21, are directed to the abstract idea of generating a

⁴ Applying this two-step process to claims challenged under the abstract idea exception, the courts typically refer to step one as the "abstract idea" step and step two as the "inventive concept" step. *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016).

⁵ "Conducting a transaction is an economic practice and can also be organizing human activities such as buying, selling, paying for bought item, etc. (similar to creating a contractual relationship)." Final Act. 2.

⁶ "[T]he invention is an abstract idea since the invention can be construed as an economic practice, organizing human activities, an idea of itself and/or mathematical relationships/formulas." Final Act. 4.

⁷ "The claim limitations, generating a verification value in response to a transaction is at least an economic practice similar to creating a contractual relationship" (Ans. 3), and "wherein the transaction (economic practice) is thereafter authenticated when the verification value matches any of the plurality of candidate verification values is at least an economic practice similar to creating a contractual relationship." Ans. 7.

verification value in response to a transaction, which we find to be an economic practice.

The Claims Recite Significantly More than the Abstract Idea

In applying step two of the *Alice* analysis, our reviewing court guides we must "determine whether the claims do significantly more than simply describe [the] abstract method" and thus transform the abstract idea into patentable subject matter. *Ultramerical, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014). We look to see whether there are any "additional features" in the claims that constitute an "inventive concept," thereby rendering the claims eligible for patenting even if they are directed to an abstract idea. *Alice*, 134 S. Ct. at 2357. Those "additional features" must be more than "well-understood, routine, conventional activity." *Mayo*, 132 S. Ct. at 1298.

Appellants urge the claims on appeal

share substantial similarities to the claims of *DDR Holdings, LLC v. Hotels.com, et al.* (Fed. Cir. Dec. 5, 2014) as well as the claims of *Enfish, LLC v. Microsoft Corp.* (Fed. Cir. May 12, 2016). The claims in each of these cases was found to be directed to non-abstract subject matter in the analysis with respect to 2A of *Alice*.

App. Br. 6. With respect to the claims on appeal, Appellants assert "[t]he recited claim elements clearly improve the technology field of securing electronic transactions," and continue their arguments by contrasting the claimed approach with the alleged deficiencies of conventional systems. App. Br. 7–8. "Thus, embodiments of the invention provide for improved data security over conventional payment processing systems." App. Br. 8 (emphasis omitted). Citing *Enfish*, Appellants further observe "a claim is

not made ineligible for patent merely because it may be implemented on a generic computer." App. Br. 11. Further, "[e]ach of the [claim limitations add] meaningful limitations to the claims . . . [and] the Office has made no effort to address any of these limitations to note why they are not meaningful and do no more than generally link the use of the abstract idea to a particular technological environment." App. Br. 13.

We find Appellants' claimed invention generates a verification value in response to a transaction involving a portable consumer device and sends the verification value and a portion of a dynamic data element to a service provider that determines whether the verification value matches any of a plurality of candidate verification values and, if a match is determined, the transaction is authenticated, thus helping to reduce transactional fraud. *See* claims 9 and 21; *see also* Spec. ¶¶ 12, 20, 24, 56.

We find the claimed transaction authentication, while abstract itself, improves the underlying technology involved with fraud-prevention, and therefore adds "significantly more" than merely implementing the abstract idea of generating a verification value.

Therefore, we are persuaded of error in the Examiner's legal conclusion that the claims on appeal are directed to patent-ineligible subject matter.

CONCLUSION

The Examiner erred with respect to the rejection of claims 9, 10, 21–27, and 30–41 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter, and we do not sustain the rejection.

Appeal 2017-004510
Application 13/919,900

DECISION

We reverse the Examiner's decision rejecting claims 9, 10, 21–27,
and 30–41.

REVERSED

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CUTITTA, *Administrative Patent Judge*, concurring.

I agree with the decision of the majority to reverse the § 101 rejection of claims 9, 10, 21–27, and 30–41 based on *Alice's* framework and the Federal Circuit's "precedential" decisions post *Alice* for patent eligibility of software-related inventions under 35 U.S.C. § 101. I do not agree, however, that the claims are directed to an abstract idea.

As noted above by my colleagues, Appellants argue exemplary claim 21 should not be found directed to abstract subject matter because the claim shares substantial similarities to the claims of *DDR Holdings* and *Enfish*. Specifically, Appellants argue the

claims are necessarily rooted in systems that prevent unauthorized use of payment accounts. In particular, the problem to be solved by the current claims relates to reducing the amount of data that needs to be passed during a payment transaction and preventing an unauthorized person from

skimming data in electronic payment transactions to thereby conduct fraudulent payment transactions.

App. Br. 7.

I find Appellants' arguments persuasive. Claim 21 recites "wherein the transaction is thereafter authenticated when the received verification value matches any of the plurality of candidate verification values," and so expressly recites authenticating a transaction when specific conditions are met. The authentication is performed to prevent an unauthorized person from conducting fraudulent transactions. Spec. ¶ 8. In addition, claim 21 recites "receive a verification value and a portion of a dynamic data element," and "determine a plurality of candidate dynamic data elements using the portion of the dynamic data element." The claim is further directed to using the plurality of candidate dynamic data elements for the transaction authentication. Accordingly, claim 21 is focused on a specific asserted improvement in computerized authentication, i.e., authenticating transactions while "reducing the number of characters in Track data" (Spec ¶ 7) to enable the consumer to conduct more than 9999 transactions despite the limited available space in the tracks (Spec ¶¶ 5, 7, 24, 41, 49). Thus, similar to other claims determined by our reviewing court to be non-abstract, claim 21 does not simply use a computer as a tool to automate conventional activity. *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1316 (Fed. Cir. 2016). Furthermore, the claimed automation goes beyond merely "organizing [existing] information into a new form." *See Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014).

I also agree with Appellants that claim 21 is similar to claims determined to be patent-eligible in *DDR Holdings* and *Enfish*. In *DDR Holdings*, the claims were determined to recite an invention that is not merely the "routine or conventional use" of technology. *DDR*, 773 F.3d at 1259. Here, claim 21 solves a technological problem (limited available storage space) akin to the problem in *DDR Holdings* (conventional Internet hyperlink protocol preventing websites from retaining visitors). *DDR Holdings*, 773 F.3d at 1265. In other words, this claim entails an unconventional technological solution (authenticating transactions while reducing the number of characters in track data) to a technological problem (limited available space in the tracks). Spec. ¶ 7. The solution requires arguably generic components, including a "database" and a "server." However, the claim's enhancing limitations necessarily require that these generic components operate in an unconventional manner to achieve an improvement in computer-based system functionality. *See Amdocs (Israel) Ltd. v. Openet Telecom, Inc.* 841 F.3d 1288, 1300–01 (Fed. Cir. 2016).

Moreover, claim 21, like the claims at issue in *Enfish*, focuses on a specific means or method that improves the relevant technology (computer-based authentication) rather than being directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery. *Enfish*, 822 F.3d at 1336.

Because I find claim 21 is not directed to ineligible subject matter, I would not reach *Alice* step two. *Enfish*, 822 F.3d at 1339. Accordingly, I would determine claims 9, 10, 21–27, and 30–41 recite statutory subject matter and would reverse the Examiner's rejection.