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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte WAYNE WHITCOMB and DAVID C. BOYLE

Appeal 2019-001634
Application 14/486,335
Technology Center 3600

Before JASON V. MORGAN, JOHN F. HORVATH, and MICHAEL M. BARRY, *Administrative Patent Judges.*

HORVATH, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] seeks review of the Examiner's decision to reject claims 1–5. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as salesforce.com, inc. Appeal Br. 1.

CLAIMED SUBJECT MATTER

The invention is directed to "the storage of and access to sensitive personal information, which may be used to protect the confidentiality of sensitive data and to control access to the data." Spec. ¶ 1. "A plurality of databases or data structures (generally data stores) 300, 310, 320 and 330 store a corresponding plurality of PII [personally identifying information] fields of different types [e.g., 304, 314, 324, 334] for the same group of users." *Id.* ¶ 29, Fig. 3. For example, data store 300 stores data for PII field 304, e.g., the first names of the users. *Id.* ¶ 32, Fig. 4. The data is stored as "a plurality of data pairs whereby a PII information type field for a user (e.g., PII_01 or first name) is paired with a distinct identifying number or code (GUID) to make a distinct PII-GUID data pair." *Id.* Similarly, data store 310 can store data for PII field 314 (date of birth) for the plurality of users as "data pair[s] including the date of birth data itself PII_02 for [each] user and an associated GUID for that data for that user." *Id.* ¶ 33, Fig. 5.

Storing the data in this way allows the content of "data store 31[0] containing the set of user birth dates 314" to be known without knowing "which birth dates 314 belong[] to which user names 304." *Id.* ¶ 35. To correlate all of the PII information stored for a particular user in the plurality of data stores 300–330, "a secure data store containing the GUID codes for the various users' PII data fields" is used. *Id.* ¶ 36. The secure data store "enable[s] the system to determine which GUID codes from each of the data stores . . . belong to a same user." *Id.* ¶ 36. Data in the secure data store "associate[s] the correct GUID codes with one another" across the different data fields and/or stores, allowing an authorized user to "see the PII data for a given user in [its] entirety." *Id.*

Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A method for computer storage and access of personally identifying information (PII) including a plurality of fields of PII, comprising:
>
> collecting a plurality of PII data relating to a plurality of respective fields of PII for each user of a plurality of users;
>
> associating a unique identifying code with each said PII datum for each said field of PII so as to create unique data pairs, each data pair comprising said PII datum and its associated unique identifying code, where each unique identifying code is a globally unique identification (GUID) that is unique to the field of PII to which that PII datum belongs and to the user to which that PII datum relates;
>
> storing said data pairs in one or more computer data stores without organization from which can be determined which data pairs comprising PII data for a given user belong to which other data pairs for that same user;
>
> securing in a further separate computer data store a data structure that associates with each said user the unique identifying codes of the data pairs that comprise PII data for that user;
>
> subjecting the PII data in the one or more computer data stores to one or more queries;
>
> returning data pairs from the one or more computer data stores matching the one or more queries, where those returned data pairs (i) comprise PII data for a plurality of said users, (ii) are without organization from which can be determined which data pairs comprising PII data for a given user belong to which other data pairs for that same user; and
>
> utilizing the further separate computer data store to identify, from the unique identifying codes in the returned data pairs, which PII data for a given user in those returned data

pairs belongs to which other PII data in those returned data pairs for that same user.

REJECTIONS

Claims 1–5 stand rejected under 35 U.S.C. § 101 as directed to unpatentable subject matter. Final Act. 3–5.

OPINION

We review the appealed rejections for error based upon the issues identified by Appellant. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential). Appellant argues for the patentability of claims 1–4 as a group and, although purporting to separately argue for the patentability of claim 5, argues that claim 5 is patentable for the same reasons as claims 1–4. *Compare* Appeal Br. 7–22, *with id.* at 22–23. We select claim 1 as a representative claim, and review the rejection of claims 1–5 based on our analysis of the rejection of claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv). Any arguments not raised by Appellant are waived. *Id.*

We have reviewed the Examiner's rejection of claims 1–5 in light of Appellant's arguments that the Examiner has erred. Because we agree with at least one of Appellant's arguments pertaining to all of the claims, we reverse the Examiner's rejection of claims 1–5 as directed to patent ineligible subject matter. In doing so, we take no position regarding whether any of the claims are patentable under 35 U.S.C. §§ 102, 103, or 112. We highlight the following for emphasis.

Rejections under 35 U.S.C. § 101

The Examiner finds claims 1–5 are patent ineligible because they are "directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more." Final Act. 3.

Principles of law

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." However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *See Alice Corp. v. CLS Bank Int'l,* 573 U.S. 208, 216 (2014).

In determining whether a claim falls within a judicially excluded category, we are guided by the Supreme Court's two-step framework described in *Mayo* and *Alice. Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). Accordingly, we first determine the concept to which the claim is directed. *See Alice,* 573 U.S. at 219 ("On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.,* the use of a third party to mitigate settlement risk."); *see also Bilski v. Kappas,* 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk.").

Concepts that have been determined to be patent ineligible abstract ideas include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). Concepts that have been determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and

manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

If a claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must 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." *Alice*, 573 U.S. at 221 (internal citation omitted). "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.* (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

The PTO has published guidance on the application of § 101 to patentability determinations. *See 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) ("2019 PEG"). Under step 1 of that guidance, we first determine whether the claim recites a statutory class (i.e., a process, machine, manufacture, or composition of matter). *Id.* at 53–54. If it does not, it is not patent eligible. If it does, we next determine whether the claim recites:

> Step 2A – Prong One: any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity, such as a fundamental economic practice, or mental processes).

Id. at 52, 54. If the claim does not recite a judicial exception, it is patent eligible. *Id.* at 54. If it does, we next determine whether the claim recites:

> Step 2A – Prong Two: additional elements that integrate the judicial exception into a practical application *(see* Manual of Patent Examining Procedure (MPEP) § 2106.05(a)–(c), (e)–(h) (9th Ed., Rev. 08-2017 (Jan. 2018)).

84 Fed. Reg. at 54–55. If the claim integrates a judicial exception into a practical application, it is patent eligible. *Id.* If it does not, we next determine whether the claim recites:

> Step 2B: additional elements beyond the judicial exception that are more than "well-understood, routine, conventional" elements in the field (*see* MPEP § 2106.05(d)).

Id. at 56. If the claim adds more than well-understood, routine, and convention additional elements, it is patent eligible. *Id.* If it does not, it is not patent eligible. *Id.*

2019 PEG Step 1

Under step 1 of the subject matter eligibility guidance, we first determine whether the claims recite a statutory class (i.e., a process, machine, manufacture, or composition of matter). *Id.* at 53–54. Claims 1–4 recite a process (i.e., a method for computer storage and access) and claim 5 recites a machine (i.e., a computer storage and access system having first, second, and third data stores). *See* Appeal Br. 25–27 (Claims App.). Thus, all of claims 1–5 recite a statutory class.

Accordingly, we next consider whether the claims recite judicial exceptions under step 2A, prong one.

2019 PEG Step 2A, prong one

Under step 2A, prong one of the eligibility guidance, we determine whether a claim recites a judicial exception such as an abstract idea, law of nature, or natural phenomenon. 84 Fed. Reg. at 54. To do so, we (1) identify the limitations in the claim (either individually or in combination) that recite an abstract idea, and (2) determine whether the identified abstract idea falls within one of the subject matter groupings consisting of (a) mathematical concepts (relationships, formulas, equations, or calculations), (b) methods of organizing human activity (fundamental economic practices, commercial or legal interactions, or managing behavior or relationships), and (c) mental processes (concepts performed in the mind such as observation, evaluation, judgment, and opinion). *Id.* at 52.

Claim 1 recites a method for computer storage and access of PII that includes a plurality of PII fields. *See* Appeal Br. 25–26 (Claims App.). The Examiner finds the claims recite one or more abstract ideas, including "collecting information, analyzing it, and displaying certain results of the collection and analysis." Final Act. 3. Appellant argues the Examiner has failed to establish a prima facie case of unpatentability, and has instead provided "a laundry list of purported abstract ideas" without "equat[ing] any of them with the subject matter of claims 1–4." Appeal Br. 8. Appellant further argues the Examiner erred by ignoring significant limitations in the rejected claims that render them patent eligible, including storing "data pairs . . . 'without organization from which can be determined which data pairs belong with which other data pairs,'" and maintaining a separate computer store "to identify, from the unique codes in . . . returned data pairs, which PII data belong with which other PII data for *a given user*." *Id.* at 8–9.

As discussed above, our analysis under step 2A, prong one asks whether the claims recite judicially excepted abstract ideas. 84 Fed. Reg. at 54. Notwithstanding Appellant's arguments to the contrary, we are persuaded the Examiner has identified limitations in claim 1 that recite judicially excepted abstract ideas such as "collecting information" (e.g., PII data) and "using categories to organize, store, and transmit information" (e.g., associating PII data with unique identifying codes to organize, store, and transmit information). *See* Final Act. 3–4 (citing *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016); *Cyberfone Systems, LLC v. CNN Interactive Group, Inc.*, 558 Fed. App'x. 988 (Fed. Cir. 2014)). As the 2019 PEG explains, because these limitations, under their broadest reasonable interpretation, can be performed by people with only the aid of pen and paper, they are abstract ideas that fall under the mental processes category. *See* 84 Fed. Reg. at 52.

Accordingly, having determined claim 1 recites a plurality of judicial exceptions in the form of mental processes (e.g., collecting, organizing, and storing information), we next consider whether claim 1 recites additional elements that integrate these judicial exceptions into a practical application. 84 Fed. Reg. at 54–55.

2019 PEG Step 2A, prong two

Under step 2A, prong two, a claim that recites a judicial exception is not "directed to" that judicial exception if the claim as a whole "integrates the recited judicial exception into a practical application of the exception." *Id.* at 54. This involves (a) identifying whether the claim recites elements in addition to the judicial exceptions, and (b) determining whether these

additional elements individually and in combination integrate the judicial exceptions into a practical application. *Id.* at 54–55.

Additional elements integrate judicial exceptions into a practical application when they (i) improve the functioning of a computer or some other technology, (ii) effect a particular treatment or prophylaxis for a disease or medical condition, (iii) implement or use the judicial exceptions in conjunction with particular machines or manufactures that are integral to the claim, (iv) transform or reduce a particular article to a different state or thing, or (v) do more than merely link the judicial exceptions to a particular technological environment. *Id.* at 55. Additional elements do not integrate judicial exceptions into a practical application when they (i) merely include instructions to implement the judicial exceptions on a computer, (ii) add insignificant pre- or post-solution activity, or (iii) do no more than link the judicial exceptions to a particular technological environment. *Id.*

The Examiner finds that although the claims recite additional limitations, those limitations are not "sufficient to amount to significantly more than the judicial exception[s] because the additional elements or combinations of elements . . . amount to no more than a recitation of (A) a generic computer structure[] that . . . merely links the abstract idea to a particular technological environment" or (B) "well understood, routine, and conventional activities previously known to the pertinent industry." Final Act. 4.

Appellant argues that claims 1–5 are patentable because they recite additional elements that "represent improvements in the way computers operate" and "specific steps providing advances in computer security," including "a method of storing and accessing PII data that improve[s] security" and that is "more than a mere result." *Id.* at 18–19 (citing *Enfish*

LLC v. Microsoft Corp., 833 F.3d 1327 (Fed. Cir. 2016); quoting *Finjan, Inc. v. Blue Coat Systems, Inc.*, 879 F.3d 1299, 1305–06 (Fed. Cir. 2018).

We agree with Appellant. In addition to collecting PII, associating the PII with unique identifiers, and storing the PII as PII-identifier pairs, claim 1 recites the additional limitation of "securing in a further separate computer data store a data structure that associates with each said user the unique identifying codes of the data pairs that comprise PII data for that user." Appeal Br. 25 (Claims App'x.). Claim 1 further recites receiving, in response to querying the one or more data stores for PII, matching data pairs that "comprise PII data for a plurality of users . . . without organization from which can be determined which data pairs . . . for a given user belong to which other data pairs for that same user." *Id.* To determine the latter, claim 1 recites utilizing the information stored in "the further separate computer data store to identify, from the unique identifying codes in the returned data pairs, which PII data for a given user . . . belongs to which other PII data . . . for that same user." *Id.*

Thus, claim 1 as a whole recites additional limitations that do more than simply claim a computer security result. Instead, the additional limitations integrate the recited mental process judicial exceptions (e.g., collecting, organizing, and transmitting information) into a practical application that improves the way a computer can securely store and retrieve sensitive PII. Because claim 1 integrates a judicial exception into a practical application, as do claims 2–5, claims 1–5 are patent eligible. *See* 84 Fed. Reg. at 54–55.

CONCLUSION

The Examiner's rejection of claims 1–5 as directed to unpatentable subject matter is reversed.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	References / Basis	Affirmed	Reversed
1–5	101	Eligibility		1–5

REVERSED