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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RAJESH JUGULUM, RAJALAKSHMI RAMACHANDRAN,
JAGMEET SINGH, ROBERT A. GRANESE, KENNETH BRZOZOWSKI,
HAROLD IAN JOYCE, and DON GRAY

Appeal 2017-008727
Application 13/235,703¹
Technology Center 3600

Before ANTON W. FETTING, CYNTHIA L. MURPHY, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1–3, 7, 11, 12, 29, and 30. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ The Appellants identify Citigroup Technology, Inc. as the real party in interest. Appeal Br. 3.

ILLUSTRATIVE CLAIM

1. A method, comprising:

selecting, by a microprocessor, a group of proposed critical data elements from a plurality of proposed critical data elements consisting at least in part of type of account, original balance, origination date, number of deposits, and number of loans based at least in part on ranking each of the plurality of proposed critical data elements according to weighted criteria consisting at least in part of ease of access to each proposed critical data element, regulatory risk associated with each proposed critical data element, financial risk associated with each proposed critical data element, and reputation risk associated with each proposed critical data element;

collecting, by the microprocessor, samples of data for each of the proposed critical data elements in said group of proposed critical data elements from a database storing a population of data elements representing attributes of each of a plurality of different financial transactions;

identifying, by the microprocessor, a portion of said group of proposed critical data elements based at least in part on a ranking of respective degrees of correlation between said data samples for each of the proposed critical data elements in said group of proposed critical data elements;

generating, by the microprocessor, a plurality of different, overlapping sets of data quality rules at least in part in terms of data completeness and data validity for each of the proposed critical data elements in said portion of said group of proposed critical data elements, each set of data quality rules comprising a different number of data quality rules for the same proposed critical data elements in said portion of said group of proposed critical data elements;

identifying, by the microprocessor, one of the plurality of different, overlapping sets of data quality rules for monitoring a quality of data in said database based at least in part on a difference between a value for each of said sets of data quality rules as a function of accuracy or completeness of data in the database and a sum of a cost of creating each set of data quality

rules as a function of number, complexity, and interdependency of rules in each of said sets of data quality rules;

monitoring, by the microprocessor, the quality of data within said database using said identified one of the plurality of different, overlapping sets of data quality rules [sic]

identifying, by the microprocessor, critical data elements that produce a predefined high number of outliers in said data within said database based on said monitoring the quality of data in said database indicative of a likelihood that a process is out of control; and

identifying, by the microprocessor, causes for the predefined high number of outliers produced by said critical data elements in said data within said database.

REJECTION

Claims 1–3, 7, 11, 12, 29, and 30 are rejected under 35 U.S.C. § 101 as ineligible subject matter.

ANALYSIS

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. Yet, subject matter belonging to any of the statutory categories may nevertheless be ineligible for patenting. The Supreme Court has interpreted § 101 to exclude laws of nature, natural phenomena, and abstract ideas, because they are regarded as the basic tools of scientific and technological work, such that including them within the domain of patent protection would risk inhibiting future innovation premised upon them. *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013).

Of course, “[a]t some level, ‘all inventions . . . embody, use, reflect, rest upon, or apply’” these basic tools of scientific and technological work.

Alice Corp. v. CLS Bank Int'l, 134 S. Ct. 2347, 2354 (2014) (citation omitted). Accordingly, evaluating ineligible subject matter, under this judicial exclusion, involves a two-step framework for “distinguish[ing] between patents that claim the buildin[g] block[s] of human ingenuity and those that integrate the building blocks into something more, thereby transform[ing] them into a patent-eligible invention.” *Id.* (internal quotation marks and citation omitted). The first step determines whether the claim is directed to judicially excluded subject matter (such as a so-called “abstract idea”); the second step determines whether there are any “additional elements” recited in the claim that (either individually or as an “ordered combination”) amount to “significantly more” than the identified judicially excepted subject matter itself. *Id.* at 2355.

According to the Examiner, in applying the first step of the *Alice* framework, independent claim 1 is directed to “data quality assessment of a plurality of different financial transactions,” which the Examiner regards as an abstract idea. Final Action 3, 6. In regard to the second *Alice* step, the Final Office Action states:

The elements of the instant process, when taken alone, each execute in a manner routinely and conventionally expected of these elements. . . . [The claimed steps] are conventional functions of a computer. The elements of the instant process, when taken in combination, together do not offer substantially more than the sum of the functions of the elements when each is taken alone. That is, the elements involved in the recited process undertake their roles in performance of their activities according to their generic functionalities which are well-understood, routine and conventional. The elements together execute in routinely and conventionally accepted coordinated manners and interact with their partner elements to achieve an overall outcome which, similarly, is merely the combined and

coordinated execution of generic computer functionalities which are well-understood, routine and conventional activities previously known to the industry.

Id. at 8–9. *See also* Answer 13, 16–17.

Notwithstanding the Appellants’ dispute regarding the Examiner’s application of the first *Alice* step (*see* Appeal Br. 9–12), we are persuaded that reversal is appropriate, in the present Appeal, based upon the following argument of the Appellants, concerning the second *Alice* step.

The second *Alice* step considers whether the claim limitations “involve more than performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’” *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347–48 (Fed. Cir. 2014) (quoting *Alice*, 134 S. Ct. at 2359). Notably, “[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). The inquiry, under the second *Alice* step, “requires more than recognizing that each claim element, by itself, was known in the art,” because “the non-conventional and non-generic arrangement of known, conventional pieces” may amount to significantly more than the identified judicial exception. *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016).

Yet, as the Appellants argue (*see* Appeal Br. 9, 13), the Examiner’s analysis lacks support for the assertion that the additional elements of claim 1 are well-understood, routine, and conventional. The Examiner states a conclusion, to such effect, but provides no factual or other support for the position. *See* Final Action 8–9. *See also* Answer 13, 16–17. For example,

the Examiner presents no analysis or evidentiary support for the asserted conventionality of at least the following features of claim 1: “identifying . . . a portion of said group of proposed critical data elements based at least in part on a ranking of respective degrees of correlation between said data samples”; “generating . . . a plurality of different, overlapping sets of data quality rules at least in part in terms of data completeness and data validity”; “each set of data quality rules comprising a different number of data quality rules for the same proposed critical data elements in said portion of said group of proposed critical data elements”; and “identifying . . . critical data elements that produce a predefined high number of outliers in said data . . . based on said monitoring the quality of data in said database indicative of a likelihood that a process is out of control.”

Therefore, we are persuaded that the Examiner has not adequately explained why claim 1 fails to recite any limitations that are “significantly more” than the identified abstract idea itself.

The foregoing discussion refers to independent claim 1, but it is equally applicable to the other independent claims in the Appeal (claims 29 and 30). Accordingly, we do not sustain the rejection of claims 1–3, 7, 11, 12, 29, and 30 under 35 U.S.C. § 101.

DECISION

We REVERSE the Examiner’s decision rejecting claims 1–3, 7, 11, 12, 29, and 30 under 35 U.S.C. § 101.

REVERSED