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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SILVIO TAVARES, SUSAN FAHY, and
DENNIS CARLSON

Appeal 2017-009694
Application 13/412,451¹
Technology Center 3600

Before JOHNNY A. KUMAR, JOHN P. PINKERTON, and
JOYCE CRAIG, *Administrative Patent Judges*.

CRAIG, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants² appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–19, which are all of the claims pending in this application. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

¹ This application is a continuation-in-part of US 13/032,878, for which a Decision on Appeal was entered on July 31, 2018. App. Br. 3.

² According to Appellants, the real party in interest is The First Data Corporation. App. Br. 3.

INVENTION

Appellants' invention relates to financial data normalization systems and methods. Abstract. Claim 1 is illustrative and reads as follows:

1. A method for normalizing point of sale (POS) sales data, the method comprising:

aggregating, by a computer system, point of sale (POS) datasets from a plurality of POS terminals, each POS terminal being configured to collect transaction data as a function of transactions effectuated via the POS terminal, wherein the POS datasets for each transaction comprise a transaction amount, a merchant classifier, and a transaction time, and wherein the POS datasets comprise a percentage of transactions effectuated within an overall market;

obtaining, by the computer system, an industry subset of the aggregated POS datasets for a given timeframe based on the merchant classifier, wherein the industry subset comprises transactions for a given industry;

calculating a reliable portion of the industry subset, the reliable portion comprising only data having a statistically insignificant variability from a baseline;

calculating, by the computer system, a sales value for the reliable portion of the industry subset;

applying, by the computer system, a time-based fluctuation factor to the sales value to account for sales fluctuations that are related at least in part to seasonality;

applying a normalization factor to the sales value based on a percentage of the sales value in terms of dollars relative to a size of the overall market to obtain an indexed sales value for the given timeframe;

generating an interactive formatted graphical report showing one or more of a trend of the indexed sales value or a projected sales volume based on the indexed sales value,

wherein the interactive formatted graphical report is automatically formatted using auto-graphics zones, and wherein

the interactive formatted graphical report comprises a plurality of selectable views with each of the plurality of selectable views displaying a different subset of data when selected; and

transmitting the interactive formatted graphical report over a wireless communication channel to a user device;

wherein the interactive formatted graphical report causes the interactive formatted graphical report to display on the user device such that each of the plurality of selectable views is selectable by the user device to show each of the different subsets of data;

wherein the time-based fluctuation factor is calculated by using a time series of historical daily data from the POS datasets, and wherein the time-based fluctuation factor is further calculated by selecting a previous time frame, calculating daily sales for the reliable portion of the industry subset for at least some days in the time frame, and performing a statistical analysis of the daily sales for those days to obtain the time-based fluctuation factor.

REJECTION

Claims 1–19 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception, i.e. an abstract idea, without significantly more. Final Act. 7–10.

ANALYSIS

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. 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. *E.g.*, *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an 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)). In accordance with that framework, we first determine what concept the claim is “directed to.” *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. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, 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, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding . . . rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 193 (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 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176; *see also id.* at 191 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Supreme Court also indicated that a claim “seeking patent

protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.” *Id.* (citing *Benson* and *Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the 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 quotation marks 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 recently published revised guidance on the application of § 101. USPTO’s January 7, 2019 Memorandum, 84 Fed. Reg. 50, 2019 Revised Patent Subject Matter Eligibility Guidance (“2019 Guidance”). Under that guidance, we first look to whether the claim recites:

- (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human interactions such as a fundamental economic practice, or mental processes); and
- (2) additional elements that integrate the judicial exception into a

practical application (see MPEP § 2106.05(a)–(c), (e)–(h)) (9th ed. 2018).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that are not “well-understood, routine, 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 2019 Guidance.

Here, Appellants contend the Examiner erred because “the present claims are not “directed to” the use of mathematical algorithms or collecting and comp[ar]ing information as indicated by the Office Action.”³ App. Br. 9.

Step 2A, Prong One – Recited Judicial Exception

Step 2A of the 2019 Revised Patent Subject Matter Eligibility Guidance is a two-prong inquiry. In Prong One, we evaluate whether the claim *recites* a judicial exception. For abstract ideas, Prong One represents a change as compared to prior guidance because we determine whether the claim recites mathematical concepts, certain methods of organizing human activity, or mental processes.

³ Because we agree with at least one of the dispositive arguments advanced by Appellants, we need not reach the merits of Appellants’ other contentions. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (finding an administrative agency is at liberty to reach a decision based on “a single dispositive issue”).

We conclude the following steps of independent claim 1 recite mental processes that practically could be performed via pen and paper or in a person's mind:

aggregating . . . point of sale (POS) datasets from a plurality of POS terminals, each POS terminal being configured to collect transaction data as a function of transactions effectuated via the POS terminal, wherein the POS datasets for each transaction comprise a transaction amount, a merchant classifier, and a transaction time, and wherein the POS datasets comprise a percentage of transactions effectuated within an overall market;

obtaining . . . an industry subset of the aggregated POS datasets for a given timeframe based on the merchant classifier, wherein the industry subset comprises transactions for a given industry;

calculating a reliable portion of the industry subset, the reliable portion comprising only data having a statistically insignificant variability from a baseline;

calculating . . . a sales value for the reliable portion of the industry subset;

applying . . . a time-based fluctuation factor to the sales value to account for sales fluctuations that are related at least in part to seasonality;

applying a normalization factor to the sales value based on a percentage of the sales value in terms of dollars relative to a size of the overall market to obtain an indexed sales value for the given timeframe; . . .

wherein the time-based fluctuation factor is calculated by using a time series of historical daily data from the POS datasets, and wherein the time-based fluctuation factor is further calculated by selecting a previous time frame, calculating daily sales for the reliable portion of the industry subset for at least some days in the time frame, and performing a statistical analysis of the daily sales for those days to obtain the time-based fluctuation factor.

App. Br. 18 (Claims App.).

Similarly, we conclude the following steps of independent claim 8 recite mental processes that practically could be performed via pen and paper or in a person's mind:

obtaining an industry subset of the aggregated POS datasets for a given timeframe based on the merchant classifier, wherein the industry subset comprises transactions for a given industry;

calculating a reliable portion of the industry subset, the reliable portion comprising only data having a statistically insignificant variability from a baseline;

calculating a sales value for the reliable portion of the industry subset;

applying a time-based fluctuation factor to the sales value to account for sales fluctuations that are related at least in part to seasonality, wherein the time-based fluctuation factor is calculated by using a time series of historical daily data from the POS datasets, and wherein the time-based fluctuation factor is further calculated by selecting a previous time frame, calculating daily sales for the reliable portion of the industry subset for at least some days in the time frame, and performing a statistical analysis of the daily sales for those days to obtain the time-based fluctuation factor;

applying a normalization factor to the sales value based on a percentage of the sales value in terms of dollars relative to a size of the overall market to obtain an indexed sales value for the given timeframe;

App. Br. 20 (Claims App.).

We also conclude the following steps of independent claim 15 recite mental processes that could practically be performed via pen and paper or in a person's mind:

obtaining an industry subset of the aggregated POS data for a given timeframe based on the merchant classifier, wherein the industry subset comprises transactions for a given industry;

calculating a reliable portion of the industry subset, the

reliable portion comprising only data having a statistically insignificant variability from a baseline;

calculating a sales value for the reliable portion of the industry subset;

applying a time-based fluctuation factor to the sales value to account for fluctuations between the given timeframe and other timeframes, wherein the fluctuation factor is balanced against a norm of 1 such that a fluctuation factor less than 1 suggests a month will have less spend than an average month and a fluctuation factor great than 1 suggests a month will have more spend than the average month;

applying a normalization factor to the sales value based on a percentage of the sales value in terms of dollars relative to a size of the overall market to obtain an indexed sales value for the given timeframe;

using the indexed sales value to predict a projected sales value for a future timeframe;

App. Br. 22 (Claims App.).

Because we conclude the independent claims recite an abstract idea, we proceed to Prong Two to determine whether the claims are “directed to” the judicial exception.

Step 2A, Prong Two –Practical Application

If a claim recites a judicial exception, in Prong Two we determine whether the recited judicial exception is integrated into a practical application of that exception by: (a) identifying whether there are any additional elements recited in the claim beyond the judicial exception(s); and (b) evaluating those additional elements individually and in combination to determine whether they integrate the exception into a practical application. If the recited judicial exception is integrated into a practical application, the claim is not *directed to* the judicial exception.

Here, claim 1 recites the additional elements of “a computer system,”

a “generating” step, and a “transmitting step.” Considering the claim as a whole, the “generating” step applies or uses the abstract idea in a meaningful way such that the claim as a whole is more than a drafting effort designed to monopolize the exception. Thus, the abstract idea is integrated into a practical application. Specifically, the “generating” step and associated “wherein” clause recite the following:

generating an interactive formatted graphical report showing one or more of a trend of the indexed sales value or a projected sales volume based on the indexed sales value, wherein the interactive formatted graphical report is automatically formatted using auto-graphics zones, and wherein the interactive formatted graphical report comprises a plurality of selectable views with each of the plurality of selectable views displaying a different subset of data when selected; and

...

wherein the interactive formatted graphical report causes the interactive formatted graphical report to display on the user device such that each of the plurality of selectable views is selectable by the user device to show each of the different subsets of data.

App. Br. 18–19 (Claims App.).

Claims 8 and 15 recite similar “generating” steps and associated “wherein” clauses. *Id.* at 19–22.

Because claims 1, 8, and 15 integrate the recited judicial exception into a practical application, they are not “directed to” a judicial exception and, therefore, our inquiry ends.

For these reasons, under the 2019 Guidance, we are persuaded that the Examiner erred in concluding claims 1–19 are judicially-excepted from patentability.

Accordingly, we reverse the Examiner’s § 101 rejection of

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independent claims 1, 8, and 15, as well as the Examiner's rejection of dependent claims 2–7, 9–14, and 16–19, which stand or fall with the independent claims from which they depend.

DECISION

We reverse the decision of the Examiner rejecting claims 1–19.

REVERSED