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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte WENXIONG W. YAO, ERIC ROSENBLATT, ALEXEI M. KISSELEV, NATHAN PIETER DEN HERDER, and SILVIU CRISTIAN MARGHESCU[1]

Appeal 2017-000515
Application 13/031,852
Technology Center 3600

Before MURRIEL E. CRAWFORD, BIBHU R. MOHANTY, and MATTHEW S. MEYERS, *Administrative Patent Judges*.

MOHANTY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellant seeks our review under 35 U.S.C. § 134 of the final rejection of claims 23–31 which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b). Oral arguments were presented on November 28, 2018.

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[1] The Appeal Brief identifies the Real Party in Interest as Fannie Mae. App. Br. 4.

SUMMARY OF THE DECISION

We AFFIRM.

THE INVENTION

The Appellant's claimed invention is directed to estimating real estate values (Spec., para. 1). Claim 23, reproduced below, is representative of the subject matter on appeal.

> 23. A method for estimating property values, the method comprising:
>
> specifying, by a computer, a geographical region, the geographical region including therein a plurality of first sub-regions that each include a plurality of second sub-regions, the plurality of
> second sub-regions being at a level of granularity equal to or finer than census block groups;
>
> selecting, by the computer, properties that are located within the geographical region, and accessing, by the computer, property data of each of the properties;
>
> determining, by the computer, a price equation for the geographical region by performing a regression based upon the property data, the regression modeling the relationship between sale price and a set of explanatory variables, the set of explanatory variables including a location variable that is a categorical variable specifying in which of the plurality of second sub-regions each of the
> respective selected properties is located, wherein a location fixed effect is determined for each of the plurality of second sub-regions from the location variable;
>
> estimating, by the computer, a price of a subject property located within a given second sub-region of the plurality second sub-regions by adjusting comparable properties by adjustment factors that are based on the price equation, the adjustment factors including a location adjustment factor; and
>
> determining, by the computer, whether a first number is less than a first predetermined threshold, the first number

corresponding to a number of the selected properties that are located within the given second sub-region,

wherein, when the first number is not less than the first predetermined threshold, the location adjustment factor is determined by the computer from the location fixed-effect of the given second sub-region, and

when the first number is less than the first predetermined threshold, the method further comprises:

determining, by the computer, a location offset function using the determined price equation;

determining, by the computer, whether a second number is less than a second predetermined threshold, the second number corresponding to a number of the selected properties that are located within a given first sub-region of the plurality of first sub-regions, the given first sub-region including the given second sub-region;

when the second number is not less than the second predetermined threshold, calculating, by the computer, a substitute location effect for the given first sub-region by using the location offset function to calculate a location offset value for each of the selected properties that is located within the given first sub-region, the location adjustment factor being determined by the computer from the substitute location effect; and

when the second number is less than the second predetermined threshold, calculating, by the computer, a modeled location effect for the given second sub-region by:

performing a regression on the location offset function modeling the relationship between location offset and median market value at the second sub-region level to determine a location offset coefficient, and multiplying, by the computer, the determined location offset coefficient and the median market value of the given second sub-region, the location adjustment factor being determined from the modeled location effect.

THE REJECTION

The following rejection is before us for review:

Claims 23–31 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

FINDINGS OF FACT

We have determined that the findings of fact in the Analysis section below are supported at least by a preponderance of the evidence.[2]

ANALYSIS

Rejection under 35 U.S.C. § 101

The Appellant argues that the rejection of claim 23 is improper because the claim is not directed to an abstract idea (App. Br. 15–17, Reply Br. 6–8). The Appellant further argues that the claim is also "significantly more" than the alleged abstract idea (App. Br. 17–26, Reply Br. 5, 6, 8–11).

In contrast, the Examiner has determined that the rejection of record is proper (Ans. 2–12).

We agree with the Examiner. 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. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: "laws of nature, natural phenomena, and abstract ideas" are not patentable. *See, e.g.*, *Alice Corp. Pty. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014).

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[2] *See Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Patent Office).

In judging whether claim 23 falls within the excluded category of abstract ideas, we are guided in our analysis by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. *Id.* at 2355 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–76 (2012)). In accordance with that framework, we first determine whether the claim is "directed to" a patent-ineligible abstract idea. If so, we then consider the elements of the claim both individually and as "an ordered combination" to determine whether the additional elements "transform the nature of the claim" into a patent-eligible application of the abstract idea. *Id.* (internal quotations and citations omitted). This is a search for an "inventive concept" an element or combination of elements sufficient to ensure that the claim amounts to "significantly more" than the abstract idea itself. *Id.* (internal quotations and citations omitted). The Court also stated that "the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention." *Id.* at 2358.

Here, we determine that the claim is directed to the concept of estimating property values using a series of mathematical steps. This is a fundamental economic practice long prevalent in our system of commerce or an idea in itself, and is an abstract idea beyond the scope of § 101. The Specification at paragraph 1 indicates that the invention is directed to estimating real property value estimation using a regression of variables.

We next consider whether additional elements of the claim, both individually and as an ordered combination, transform the nature of the claim into a patent-eligible application of the abstract idea, e.g., whether the claim does more than simply instruct the practitioner to implement the abstract idea using generic computer components. We conclude that it does

not. The Specification at paragraph 126 describes using any combination of software, hardware, and/or firmware.

Considering each of the claim elements in turn, the function performed by the computer system at each step of the process is purely conventional. Each step of the claimed method does no more than require a generic computer to perform a generic computer function.

We note the point about pre-emption (App. Br. 18). While pre-emption "'might tend to impede innovation more than it would tend to promote it,' thereby thwarting the primary object of the patent laws" (*Alice*, 134 S. Ct. at 2354 (quoting *Mayo* 566 U.S. at 71)), "the absence of complete preemption does not demonstrate patent eligibility" (*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), *cert. denied*, 136 S. Ct. 701, (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.").

For these above reasons the rejection of claim 23, and its dependent claims, which were not separately argued is sustained. Claim 26 is directed to similar subject matter and the rejection of this claim and its dependent claims which were not separately argued is sustained for the same reasons given above.

We reach the same conclusion as to independent apparatus claim 29 and its dependent claims. Here, as in *Alice*, "the system claims are no different in substance from the method claims. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same

idea." *Alice*, 134 S. Ct. at 2351. "[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea 'while adding the words 'apply it' is not enough for patent eligibility." *Id.* at 2358 (quoting *Mayo*, 566 U.S. at 72).

CONCLUSIONS OF LAW

We conclude that Appellant has not shown that the Examiner erred in rejecting claims 23–31 under 35 U.S.C. § 101.

DECISION

The Examiner's rejection of claims 23–31 is sustained.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED