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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* MARSHALL O'MOORE,  
MAUREEN WELCH, and ROOSEVELT V. SEGARRA

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Appeal 2020-000628  
Application 15/369,334  
Technology Center 3600

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Before ERIC B. GRIMES, FRANCISCO C. PRATS, and  
TAWEN CHANG, *Administrative Patent Judges*.

PRATS, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 1–24. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant states that the real party in interest Newmark Grubb Knight Frank, a corporation organized and existing under the laws of Delaware, and having a place of business at 125 Park Avenue, New York, New York 10017. Appeal Br. 3.

### STATEMENT OF THE CASE

Appellant’s Specification explains that “commercial real estate (CRE) asset bubbles . . . may occur when the prices of securities or other assets rise so sharply and at such a sustained rate that they exceed valuations justified by fundamentals.” Spec. ¶ 2. The Specification explains that “[s]uch a rise in asset prices make[s] a sudden collapse in prices likely. Similar to natural disasters, the recovery after a dramatic downturn can be long and the cleanup can be arduous.” *Id.*

The Specification also uses the term “peak” to refer to a sharp rise or fall in real estate values:

In one example, a “peak” may be defined as the start of a major downturn in real estate values. In a further example, when processor 106 identifies a twenty percent increase over two years in cap rate spreads vs. ten year treasuries, the previous low point is tagged as a peak.

Spec. ¶ 29.

Appellant’s Figure 3, reproduced below, shows peaks in commercial real estate values in New York City, from 1978–2014:

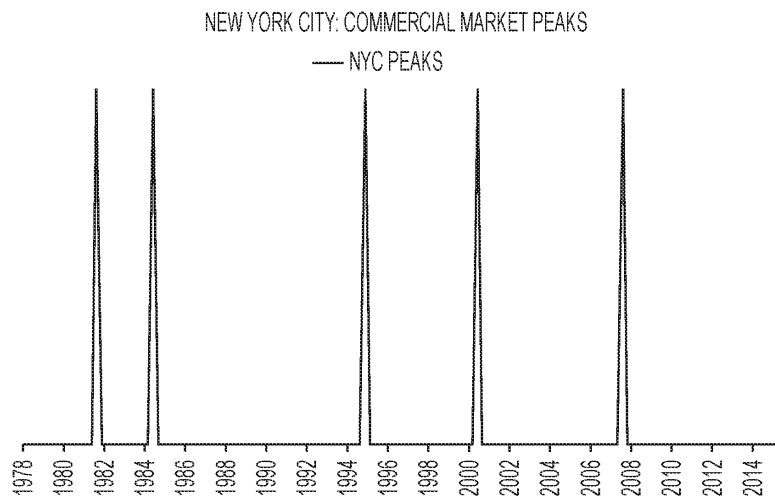


FIG. 3

FIG. 3 is a working example of peak identification for the New York City market, with a spike representing a peak. This shows that the results are largely unaffected by the choice of lag period. Peaks are identified in 1981, 1984, 1994, 2000 and 2007. This largely agrees with market practitioners' experience of market peaks. The only notable exception is the Savings and Loan crisis in the late 80's. This crisis occurred within the overall context of a booming market, and thus our drawdown calculation never finds a peak.

Spec. ¶ 31.

Appellant's invention is directed to a "method for predicting real estate bubbles based on big data analytics." Spec. ¶ 14; *see also id.* (disclosing that Appellant's invention includes a processor configured to "generate a prediction of a future peak in real estate values based at least partially on [a] plurality of previous peaks").

Appellant's Specification explains that "[v]ast amounts of historical data may need to be digitally processed to produce a quality prediction of ebbs and flows in the real estate market." Spec. ¶ 13. To accommodate the large amount of data used to predict peaks in real estate values, Appellant's invention distributes the data among "a plurality of nodes on a network such that a size of a [data] portion assigned to a respective node is in accordance with a real-time workload of the respective node." *Id.* ¶ 14.

The Specification discloses that predicting peaks in real estate values according to the invention employs a number of mathematical models. *See* Spec. ¶¶ 32–41 (explaining how equations 1–8 are used to predict peaks in real estate values).

Appellant's claim 1 is representative of the claims on appeal and reads as follows:

1. An apparatus comprising:
  - a memory device;
  - a network interface;
  - at least one processor to:
    - communicate via the network interface with remote data sources containing historical variable data associated with real estate assets, the historical variable data being stored in a plurality of diverse data sets;
    - distribute portions of the historical variable data via the network interface to a plurality of nodes on a network such that a size of a portion assigned to a respective node is in accordance with a real-time workload of the respective node, a total size of the historical variable data being larger than an available size in the memory device;
    - receive historical real estate values from the plurality of nodes that are based at least partially on the distributed portions of the historical variable data;
    - identify a plurality of previous peaks in the historical real estate values based at least partially on the historical real estate values received from the plurality of nodes;
    - generate a prediction of a future peak in real estate values based at least partially on the plurality of previous peaks; and
    - transmit an alert comprising the prediction.

Appeal Br. 17.

The following rejections are before us for review:

(1) Claims 1–24, under 35 U.S.C. § 101, as being directed to subject matter not eligible for patenting (Final Act. 7–9);<sup>2</sup> and

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<sup>2</sup> Final Office Action entered February 13, 2019.

(2) Claims 1–24, under 35 U.S.C. § 103, as being unpatentable over Fleming<sup>3</sup> and Zhang<sup>4</sup> (Final Act. 10–18).

35 U.S.C. § 101—  
ELIGIBILITY FOR PATENTING

*The Examiner’s Rejection*

The Examiner determined that Appellant’s claims are directed to “the abstract idea of **performing numerical manipulations to generate a forecast.**” Final Act. 7; *see also id.* at 7–8 (“Independent **claim 1** recites limitations directed to the abstract idea of generating a forecast (One of ordinary skill in the art would recognize that what is being performed is numerical forecasting based on different data inputs, where the forecasting is implemented using Hadoop).”).

Further, the Examiner reasoned, although the claims recite “computer systems and software to process the data to perform the claimed abstract idea steps, this implementing the abstract idea in the manner of ‘apply it’ and confining the abstract idea to a particular technological environment . . . does not provide ‘something more’ to make the claims patent eligible.” Final Act. 7.

As to claim 1 in particular, the Examiner determined that the computer elements recited in the claim are intertwined with the abstract idea, in that the computer elements merely confine the idea to a specific technological environment:

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<sup>3</sup> US 2013/0282596 A1 (published Oct. 24, 2013).

<sup>4</sup> Rui Zhang & Changbing Jiang, *The Bank Risk Forewarning Model of BP Neural Network Based on the Cloud Computing*, COMPUTING AND NETWORKING TECHNOLOGY 91–94 (2012) (ieeexplore.ieee.org) (citation provided by Examiner).

The limitations of communicating, distributing, receiving, identifying and generating, are abstract idea limitations directed to the algorithmic steps analyzing intangible data. Limitations directed to the use of a computer to process data (including in the distributed manner claimed) and display it and then to further allow a user to interact with a computer display merely implement the abstract idea in the manner of apply it and confine the abstract idea to a particular technological environment - these limitations do not provide significantly more.

Final Act. 8.

Accordingly, the Examiner determined, “because the claimed invention is an abstract idea whose implementation or embodiment on a computer does not provide ‘something more’, the claimed invention is not patent eligible under 35 USC [§] 101.” Final Act. 8 (internal quotations in original).

As to the distribution of data recited in the claims, the Examiner determined in particular that “[u]sing MapReduce (i.e. using Hadoop) to provide the functionality of the abstract idea is routine and conventional and does not provide significantly more.” Final Act. 8 (citation omitted); *see also id.* n.1 (citing Dean<sup>5</sup> as detailing “Google’s initial work in the Hadoop approach for distributed computing” and noting that “Hadoop is extremely well known and its[]s use to implement the abstract idea of forecasting or predicting is merely confining the abstract idea to a particular technological environment without significantly more”).

*Principles of Law*

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<sup>5</sup> Jeffrey Dean & Sanjay Ghemawat, *MapReduce: Simplified Data Processing on Large Clusters*, OSDI 2004: Sixth Symposium on Operating System Design and Implementation pp. 137–150, San Francisco, CA (2004).

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 has long interpreted 35 U.S.C. § 101 to include implicit exceptions, however: “[l]aws of nature, natural phenomena, and abstract ideas” are not patentable. *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 Collaborative Services v. Prometheus Laboratories., Inc.*, 566 U.S. 66 (2012) and *Alice*, 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 75–77). 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.”).

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 v. Kappos*, 561 U.S. 593, 611 (2010)); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)).

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 (quotation marks omitted).

Early in 2019, the PTO published revised guidance on the application



of § 101. USPTO, *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (January 7, 2019) (“Memorandum” or “2019 Office Guidance” or “Office Guidance”).<sup>6</sup> In light of comments received in response to the Office Guidance, the PTO subsequently issued the *October 2019 Patent Eligibility Guidance Update* (“October 2019 Update”).<sup>7</sup>

Following the Office Guidance and the October 2019 Update, under Revised Step 2A, we first look to whether the claim recites the following:

- (1) 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); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

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

- (3) adds specific limitations 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* Memorandum.

### *Analysis*

#### *Office Guidance—Revised Step 2A, Prong 1*

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<sup>6</sup> Available at <https://www.govinfo.gov/content/pkg/FR-2019-01-07/pdf/2018-28282.pdf>.

<sup>7</sup> [https://www.uspto.gov/sites/default/files/documents/peg\\_oct\\_2019\\_update.pdf](https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf).

Appellant’s claim 1 is representative of the claims subject to this rejection. Applying Revised Step 2A, Prong 1, of the 2019 Office Guidance, we find that claim 1 recites a judicial exception, in the form of a mental process. *See* Office Guidance (84 Fed. Reg. at 52 (abstract ideas include “(c) Mental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion”) (citations omitted)).

Specifically, claim 1 recites a generic apparatus with a processor that “generate[s] a prediction of a future peak in real estate values based at least partially on [a] plurality of previous peaks.” Appeal Br. 17. Forming a prediction as recited in claim 1 involves making a judgment as to a future condition based on an evaluation of past conditions, which can be accomplished using the human mind. Accordingly, we find that claim 1 recites an abstract idea, in the form of a mental process. *See* Office Guidance (84 Fed. Reg. at 52 (mental processes include “concepts performed in the human mind (including an observation, evaluation, judgment, opinion”) (citations omitted)).

We acknowledge the prediction in claim 1 involves using a processor. As explained in the 2019 Office Guidance, however, “[i]f a claim, under its broadest reasonable interpretation, covers performance in the mind but for the recitation of generic computer components, then it is still in the mental processes category unless the claim cannot practically be performed in the mind.” 84 Fed. Reg. at 52 n.14 (citing *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016)). In the present case, claim 1 merely requires generating a prediction based on historical data. Thus, the fact that claim 1 recites the use of a processor to generate the prediction does not persuade us that claim 1 does not recite a mental process.

*See* Appeal Br. 9. (“The Final Action has not established how the human mind could possibly process such diverse information in real-time or how a human could process all the data with the aid of pencil and paper.”).

As the Examiner found, moreover, claim 1’s prediction of a future peak in real estate values can be considered a mathematical concept, which is also an abstract idea. *See* Office Guidance (84 Fed. Reg. at 52 (abstract ideas include “(a) Mathematical concepts—mathematical relationships, mathematical formulas or equations, mathematical calculations”)).

Specifically, as noted above, the Specification discloses that generating a prediction of a future peak in real estate values in accordance with Appellant’s invention employs a number of mathematical models. *See* Spec.¶¶ 32–41 (explaining how equations 1–8 can be used to predict peaks in real estate values). Accordingly, we agree with the Examiner that, when given its broadest reasonable interpretation in light of the Specification, claim 1’s generating a prediction of a future peak in real estate values recites using a mathematical calculation, which is an abstract idea. *See* Office Guidance (84 Fed. Reg. at 52 (mathematical concepts include mathematical relationships and mathematical calculations)).

*Office Guidance—Revised Step 2A, Prong 2*

Having determined under Revised Step 2A, Prong 1, of the 2019 Office Guidance that Appellant’s claim 1 recites a judicial exception, we turn to Revised Step 2A, Prong 2, of the Office Guidance to determine whether claim 1 recites additional elements that integrate the judicial exceptions into a practical application. *See* Office Guidance (84 Fed. Reg. at 54–55).

We find that Appellant’s claim 1 does not recite additional elements sufficient to integrate the judicial exceptions into a practical application. Aside from the abstract idea of generating a prediction, the additional elements in the apparatus of claim 1 are a memory device, a network interface, and a processor configured to (a) communicate with remote sources of data pertaining to historical real estate values, (b) distribute the data to a plurality of network nodes according to the nodes’ workloads, (c) receive the data from the nodes, (d) identify a plurality of peaks in the historical real estate values, and (e) after predicting a future peak based on the data, transmit an alert that includes the prediction. *See* Appeal Br. 17.

Because claim 1 merely recites using the computer elements, including the processor, as tools to perform the abstract idea (the prediction), we agree with the Examiner that the computer elements in claim 1 do not integrate the abstract idea into a practical application. *See* Office Guidance (84 Fed. Reg. at 55 (example in which a judicial exception is *not* integrated into a practical application includes situation in which claim “merely includes instructions to implement an abstract idea on a computer, or merely uses a computer as a tool to perform an abstract idea”).

We are not persuaded, moreover, that the data gathering and organizing steps, or the step of transmitting an alert that includes the prediction, integrate the prediction into a practical application. *See* Office Guidance (84 Fed. Reg. at 55 n.31 (additional element that merely adds insignificant extra-solution activity to a judicial exception includes “mere data gathering such as a step of obtaining information about credit card transactions so that the information can be analyzed in order to detect whether the transactions were fraudulent”).

Appellant contends that claim 1 “clearly meets at least consideration 1 and 5 (i.e., technical improvement and meaningful application of a judicial exception). The distribution of the diverse data amongst the nodes based on workload clearly meets these two factors.” Appeal Br. 9.

As discussed above, however, claim 1 merely recites using the computer elements, including the data-distributing processor, as tools to perform the abstract idea, generating the prediction of a future peak in real estate values. Appellant does not persuade us, therefore, that the computer elements in claim 1 are sufficient to integrate the abstract idea into a practical application. *See* Office Guidance (84 Fed. Reg. at 55 (judicial exception is not integrated into a practical application when claim “merely includes instructions to implement an abstract idea on a computer, or merely uses a computer as a tool to perform an abstract idea”).

Moreover, the fact that the data and prediction involve real estate values does not persuade us that the abstract prediction is sufficiently integrated into a practical application. *See* Office Guidance (84 Fed. Reg. at 55 (example in which a judicial exception is *not* integrated into a practical application includes situation in which “an additional element does no more than generally link the use of a judicial exception to a particular technological environment or field of use”).

*Office Guidance—Step 2B*

For the reasons discussed above, we are persuaded that Appellant’s representative claim 1 recites a judicial exception (abstract idea in the form of a mental process and/or mathematical concept) under Revised Step 2A, Prong 1, of the 2019 Office Guidance, and does not integrate that judicial exception into a practical application under Revised Step 2A, Prong 2.

Accordingly, we turn to Step 2B of the Office Guidance to determine whether (a) claim 1 recites specific limitations beyond the judicial exceptions that are not well-understood, routine, or conventional in the field, or (b) whether claim 1 simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception. *See* Office Guidance (84 Fed. Reg. at 56).

In the present case, as seen above, when the elements of representative claim 1 are viewed as an ordered combination, the overall apparatus claimed, as a whole, is a generic device that includes generic computer elements programmed to distribute data to a plurality of network nodes according to the nodes' workload capacities, to receive the data, and to use the data to generate a prediction, resulting in transmission of an alert that includes the prediction. *See* Appeal Br. 17.

As the Examiner found, the distribution of data recited in claim 1 encompasses the use of a map reduce algorithm. *See* Spec. ¶ 27 (“The nodes 112 may process their respective portions in parallel and communicate their respective output back to computer apparatus 102. In one example, a map reduce algorithm may be employed to schedule the processing across the nodes, monitor the nodes, and re-execute any failures of a given node.”).

As the Examiner also found, Dean provides evidence that the map reduce algorithm was well understood, routine, and conventional in this art. *See* Dean 1 (“Programmers find the system easy to use: hundreds of MapReduce programs have been implemented and upwards of one thousand MapReduce jobs are executed on Google's clusters every day.”)

Thus, on the current record, as a whole, claim 1 recites an apparatus composed of a combination of generic computer elements configured to perform an abstract calculation, based on data distributed in a well understood, routine, and conventional fashion. We find, therefore, that when claim 1 is viewed as an ordered combination, claim 1 simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

Viewing the elements of claim 1's apparatus individually, we come to the same conclusion. As noted above, aside from the abstract generation of a prediction, claim 1's apparatus includes only generic computer elements: a memory device, a network interface, and a processor configured as discussed above. Accordingly, viewing the elements of claim 1's apparatus individually, we find that claim 1 simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

Moreover, given the Examiner's citation of the Dean reference in both the Final Action and Examiner's Answer (*see* Final Act. 8 n.1; Ans. 6), Appellant does not persuade us that the Examiner failed to advance evidence sufficient to support a finding that the data distribution elements of Appellant's claim 1 are well-understood, routine, and conventional activities previously known to the industry, specified at a high level of generality. *See* Appeal Br. 10 (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)).

In sum, for the reasons discussed, viewing Appellant's claim 1 as a whole as an ordered combination, and considering the claimed steps and elements individually, we find that the evidence of record supports the

Examiner's determination that claim 1 simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception recited in the claim.

*Eligibility for Patenting—Conclusion*

As discussed above, we are persuaded that Appellant's representative claim 1 recites a judicial exception under Revised Step 2A, Prong 1, of the 2019 Office Guidance, and does not integrate that judicial exception into a practical application under Revised Step 2A, Prong 2. As also discussed above, we are persuaded that, to the extent claim 1 recites additional elements beyond the judicial exception recited in the claim, claim 1 simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

Accordingly, applying the principles set forth in the 2019 Office Guidance and October 2019 Update, we find that the preponderance of the evidence supports the Examiner's determination that Appellant's claim 1 is directed to subject matter that is ineligible for patenting. We, therefore, affirm the Examiner's rejection of claim 1 on that ground. Claims 2–24 fall with claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

OBVIOUSNESS

*The Examiner's Rejection*

In rejecting claims 1–24 for obviousness, the Examiner cited Fleming as disclosing a computer-implemented process of predicting future peaks in real estate values, the process including the claimed steps of communicating data as to historical real estate values, identifying a plurality of previous



peaks in historical real estate values, and predicting a future peak based on the previous historic peaks. Final Act. 10–12.

The Examiner found that Fleming differs from the claims in that Fleming does not describe distributing the historical real estate value data to a plurality of nodes according to the real-time workload of each of the nodes, and then receiving the data from the nodes. Final Act. 12–13.

The Examiner cited Zhang as evidence that, despite the differences between Fleming and Zhang, a skilled artisan would have considered the claimed apparatuses and processes obvious:

The distributed computing approach applied by Zhang provides the well known benefit of distributed computing in order to perform massive data processing using many machines running in parallel. Given the large data sets involved, using Hadoop to solve the kinds of forecasting problems addressed by Fleming would provide the benefit of being able to effectively process massive amounts of data in order to make an accurate forecast. Accordingly, it would have been obvious to one of ordinary skill in the art to have modified the teachings of Fleming to have included using the distributed computing approach of Zhang because it would have provided the benefit of being able to analyze a problem whose details lay in very large amounts of data. The improvement would be the ability to forecast macroeconomic events such as real estate bubbles in order to [allow] financial planners to anticipate and mitigate the associated economic shock of bursting real estate bubbles.

Final Act. 14.

#### *Analysis*

In this instance, Appellant persuades us that the evidence of record does not support the Examiner's prima facie case of unpatentability. In particular, we agree with Appellant that the Examiner did not explain sufficiently how Fleming describes the step of generating a prediction of a

future peak in real estate values, based at least partially on a plurality of previous peaks in historical real estate values, as recited in each of Appellant’s independent claims 1, 9, and 17. *See* Appeal Br. 12; *see also id.* at 17, 19, 20 (claims 1, 9, and 17 reciting step of generating prediction).

As noted above, Appellant’s Specification uses the term “peak” to refer to a sharp rise, fall, or major downturn, in real estate values. *See* Spec. ¶ 29 (“[A] ‘peak’ may be defined as the start of a major downturn in real estate values. In a further example, when processor 106 identifies a twenty percent increase over two years in cap rate spreads vs. ten year treasuries, the previous low point is tagged as a peak.”); *see also id.* ¶ 31 and Appellant’s Fig. 3 (describing and depicting historical peaks in commercial real estate values in New York City, from 1978–2014).

In contrast to describing a prediction of a sharp rise, fall, or major downturn in real estate values, Fleming describes methods of ensuring the accuracy of appraisals of real estate properties:

Embodiments of the systems and methods described herein can be used to determine a statistical estimate of the degree of certainty of an appraisal of a property. The degree of certainty can be expressed as a confidence interval . . . , a standard deviation, a variance (e.g., the standard deviation squared), a confidence score, index, or ranking, or some other statistical measure of the likelihood that the appraisal accurately measures or estimates the true market value for the property.

Fleming ¶ 21.

In the paragraphs cited by the Examiner as corresponding to Appellant’s claimed prediction of a future peak in real estate values (*see* Final Act. 11), Fleming describes how the accuracy of an appraisal may be assigned a numerical score:

In some implementations, the appraisal accuracy score may be a weighted combination of the factors discussed above, which are transformed to a statistical standard score reflecting a “distance,” as measured in standard deviations, of a fiducial appraisal measure  $C_{it}$ , from the expected value of the appraisal  $E[A_{it}]$ . . . .

The fiducial appraisal measure  $C_{it}$  can be provided by a user (e.g., a customer), input into the system automatically or via a user computing device, input manually by an individual, or input or determined by querying public and proprietary databases. The standard score may be further transformed to a scale between 0 and 1000 (or between any other lower and upper bounded categorical or numeric range) such that the score represents a frequency of occurrence (e.g. standard score greater than 900 occurs 5% of the time) or a certain level of certainty (e.g. a standard score of 900 indicates a forecasted standard deviation of 5%) that the fiducial appraisal measure is significantly understated or overstated relative to the expected value of the appraisal of the property.

Fleming ¶¶ 43–44.

Appellant persuades us that the Examiner has not explained with sufficient clarity how, in assigning a numerical score to the accuracy of a real estate appraisal, Fleming describes, teaches, or suggests generating a prediction of a future sharp rise, fall, or major downturn in, real estate values based on historical data. In particular, although Fleming discloses that determining the accuracy of a real estate appraisal can involve evaluation of historical data (*see* Fleming ¶ 31), we are not persuaded that the Examiner has explained sufficiently how Fleming’s process involves predicting significant and sudden changes to real estate values *in the future*, as recited in Appellant’s claims.

The Examiner contends that Fleming predicts peaks in future real estate values because Fleming’s process uses a stochastic model that

identifies random peaks in values, in contrast to a deterministic model. *See* Ans. 7–13. We are not persuaded. The fact that Fleming might use a stochastic model in its evaluations fails to explain clearly or sufficiently how Fleming’s determination of the accuracy of a real estate appraisal teaches or suggests generating a prediction of a future sharp rise, fall, or major downturn in real estate values, i.e. a future peak, based on historical data.

In sum, for the reasons discussed, Appellant persuades us that the Examiner has not explained sufficiently how or why the combination of Fleming and Zhang teaches or suggests all of the features recited in Appellant’s claims 1–24. We therefore reverse the Examiner’s obviousness rejection of claims 1–24 over Fleming and Zhang.

### CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/ Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–24	101	Ineligibility	1–24	
1–24	103	Fleming, Zhang		1–24
<b>Overall Outcome</b>			1–24	

### TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED