UNITED STATES PATENT AND TRADEMARK OFFICE

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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 YUE XIAO and KYLE A. GERHART

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Appeal 2016-002437[1]
Application 13/600,778[2]
Technology Center 3600

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Before MURRIEL E. CRAWFORD, BRADLEY B. BAYAT, and
TARA L. HUTCHINGS, *Administrative Patent Judges*.

HUTCHINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final
rejection of claims 1–23. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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CLAIMED INVENTION

Appellants' claimed invention "relates generally to market research, and, more particularly, to methods and apparatus to forecast new product launch sourcing." Spec. ¶ 1.

Claims 1, 10, and 16 are the independent claims on appeal. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1.   A method to determine an effect of introducing a
> new product in a target market, comprising:
>   identifying, with a processor, shared attributes between the
> new product and a plurality of existing products in the target
> market;
>   calculating, with the processor, theoretical Dirichlet co-
> penetration values between the attributes shared between the new
> product and at least one of the plurality of existing products;
>   calculating, with the processor, panelist-based actual co-
> penetration values between the attributes shared between the new
> product and at least one of the plurality of existing products;
>   correcting, with the processor, a model-based fair share
> sourcing error caused by a Dirichlet model by calculating
> attribute distance values based on a ratio of corresponding pairs
> of the theoretical and actual co-penetration values; and
>   identifying, with the processor, a percent volume of the
> new product expected to be sourced from one of the plurality of
> existing products based on the attribute distance values.

REJECTIONS

Claims 1–23 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Claims 1–23 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite.

Claims 1–23 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Claims 1–23 are rejected under 35 U.S.C. § 103(a) as unpatentable over Anderson (US 2010/0169162 A1, pub. July 1, 2010), ANDREW S.C. EHRENBERG ET AL., *Understanding Brand Performance Measures: Using DIrechlet Benchmarks*, 57 J. BUS. RES. 1307 (2004) (hereinafter "Ehrenberg"), and PETER S.H. LEEFLANG ET AL., *Building Models for Marketing Decisions*, Springer-Science+Business Media, BV 192 (2000) (hereinafter "Leeflang").

ANALYSIS
Written Description

Whether a specification complies with the written description requirement of 35 U.S.C. § 112, first paragraph, is a question of fact and is assessed on a case-by-case basis. *See, e.g., Purdue Pharma L.P. v. Faulting, Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000) (citing *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1561 (Fed. Cir. 1991)). The disclosure, as originally filed, need not literally describe the claimed subject matter (i.e., using the same terms or *in haec verba*) in order to satisfy the written description requirement. But, the Specification must convey with reasonable clarity to those skilled in the art that, as of the filing date, Appellants were in possession of the claimed invention. *See id.*

Referring to the phrase "correcting . . . a model-based fair share sourcing error," as recited in claim 1, and similarly recited in claims 10 and 16, the Examiner finds that "[t]he Specification does not disclose such 'sourcing error' nor does it disclose a 'correction.'" Final Act. 6. Appellants argue that paragraph 11 of the Specification provides support for generalized errors associated with fair share sourcing, and paragraph 15 provides support for making corrections to sourcing errors caused by fair

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share sourcing logic. App. Br. 6–7. We agree with Appellants. In addition to the portions of the Specification cited by Appellants, paragraph 27 of the Specification describes that calcuating a relative distance illustrates a degree of substitutability. When similar attributes are found between a competing product and a newly introduced product, then "sourcing is likely to occur therebetween." Spec. ¶ 27. If sourcing will likely occur from an existing product by the same manufacturer, then a market researcher can recommend alternate markets to avoid undesirable cannibalization. *Id.*

In the Answer, the Examiner takes the position that paragraph 15 of the Specification does not provide the requisite support for the claimed "correcting," as recited in claim 1, in view of claim 2. Ans. 6. Specifically, the Examiner finds that it is unclear how the "substitutability" described in paragraph 15 of the Specification can support the claimed "'correcting' when the substitutability index in claim 2 is a separate step." *Id.* at 6–7. However, we agree with Appellants (Reply Br. 3–4) that the description at paragraph 15 for determining a degree of substitutability is not synonymous with a substitutability index, as recited in claim 2. *See* Spec. ¶¶ 27 (describing a degree of substitution), 29–30 (describing a substitutability index).

Here, the Specification conveys with reasonable clarity to those skilled in the art that, as of the filing date, Appellants were in possession of the claimed invention, including "correcting, . . . a model-based fair share sourcing error," as recited in claim 1, and similarly recited in claims 10 and 16. In view of the foregoing, we do not sustain the Examiner's rejection of claims 1–23 under 35 U.S.C. § 112, first paragraph.

Indefiniteness

In rejecting claims 1–23 under 35 U.S.C. § 112, second paragraph, the Examiner takes the position that the phrase "correcting, . . . a model-based fair share sourcing error by calculating attribute distance values based on a ratio of corresponding pairs of the theoretical and actual co-penetration values," as recited in claim 1, and similarly recited in claims 10 and 16, is unclear as to how calculating distances results in a correction to error or what is the correction. Final Act. 7–8.

However, we agree with Appellants that one of ordinary skill in the art would be able to discern the meaning of the limitation in view of paragraphs 15 and 21 of the Specification. *See* App. Br. 9–10. For example, paragraph 15 describes that even though the Dirichlet model calculates theoretical co-penetration values between attribute levels of interests, the underlying reliance upon fair share sourcing techniques causes deviation from empirical observation. In response to this problem, Appellants' invention determines a degree of substitutability between product attributes to leverage the gap between theoretical and empirical co-penetration to forcecast sourcing of new products. Spec. ¶ 15. In particular, the solution calculates a distance value between a theoretical value and empirical value to determine a "degree of substitutability." *Id.* ¶ 21. The closer attribute levels of two products are to each other, the more substitutabile the two products are for one another. *Id. See also id.* at 26 ("a new product to be introduced into the market is more likely to cannibalize from other market products having those attribute levels that are closer [in distance value] to those of the new product"); 27 (similar attributes indicate sourcing is likely to occur). When the distance values enable a market researcher to identify

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that a degree of sourcing will likely occur from an existing product of the manufacture, the researcher can recommend alternate markets to avoid cannibalization. *Id.* ¶ 27. In other words, the market researcher corrects the model-based fair share sourcing error.

In view of the foregoing, we do not sustain the Examiner's rejection of claims 1–23 under 35 U.S.C. § 112, second paragraph, as indefinite.

Non-Statutory Subject Matter

Independent Claim 1, and Dependent Claims 2–9

We are not persuaded of Examiner error by Appellants' argument that the Examiner fails to establish a prima facie case rejection of patent-ineligible subject matter under 35 U.S.C. § 101. *See* App. Br. 10–19. The Federal Circuit has repeatedly noted that "the prima facie case is merely a procedural device that enables an appropriate shift of the burden of production." *Hyatt v. Dudas*, 492 F.3d. 1365, 1369 (Fed. Cir. 2007) (citing *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992)). The court has, thus, held that the USPTO carries its procedural burden of establishing a prima facie case when its rejection satisfies the requirements of 35 U.S.C. § 132 by notifying the applicant of the reasons for rejection, "together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application." *See In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011). Thus, all that is required of the Office is that it set forth the statutory basis of the rejection, and the reference or references relied on, in a sufficiently articulate and informative manner as to meet the notice requirement of § 132. *Id.*; *see also Chester v. Miller*, 906 F.2d 1574, 1578 (Fed. Cir. 1990) (Section 132 "is violated when a rejection is so

uninformative that it prevents the applicant from recognizing and seeking to counter the grounds for rejection.").

Here, in rejecting claims 1–9 under § 101, the Examiner analyzed the claims in accordance with the *Mayo/Alice* two-step framework set forth by the Supreme Court for distinguishing statutory subject matter from non-statutory subject matter. *See Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289 (2012); *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347 (2014). Specifically, addressing step one of the *Mayo/Alice* framework, the Examiner notified Appellants that independent claim 1 and its dependents, considered as a whole, are directed to "calculating a percent volume of a new product expected to be sourced from an existing product based on attribute distance," which the Examiner characterizes as a method that can be performed mentally by a human, i.e., an abstract idea. Final Act. 8–9; *see also* Ans. 8 ("[t]he claims here are abstract because they recite a series of mathematical calculations that can be performed by a person, as identified in the [f]inal [r]ejection."). Addressing step two of the *Mayo/Alice* framework, the Examiner found that the additional elements, considered individually or in combination, do not amount to significantly more than the abstract idea. *Id.* at 8. In particular, the Examiner determines that the claims "fail[] to recite any improvements to another technology or technical field, improvements to the functioning of the computer itself, and/or meaningful limitations beyond generally linking the use of an abstract idea to a particular environment." *Id.* at 9. The Examiner, thus, notified Appellants of the reasons for the rejection "together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application." 35 U.S.C.

§ 132. And we find that, in doing so, the Examiner set forth a proper

rejection under § 101 such that the burden then shifted to Appellants to

demonstrate that the claims are patent-eligible.

We are not persuaded by Appellants' suggestion that a determination

that a claim is patent-ineligibile under 35 U.S.C. § 101 requires the claim to

preempt a fundamental building block of science or technology. *See, e.g.*,

App. Br. 11, 12, 19. Nor are we persuaded of Examiner error by Appellants'

suggestion that the Examiner erred by not applying the streamlined

eligibility analysis provided in the guidelines. *See* App. Br. 12 ("the 2014

Interim Guidelines provide a streamlined analysis for claims 'directed to

inventions that clearly do not seek to tie up the judicial exception'") (quoting

2014 Interim Guidance on Patent Subject Matter Eligibility, 79 Fed. Reg.

74618, 74625 (Dec. 16, 2014)); Reply Br. 5 (arguing claim 1 is analogous to

Example 26,[3] which provides a exemplary streamlined eligibility analysis

for an internal combustion engine claim). Not only is the streamlined

analysis an optional tool for Examiners,[4] but also pre-emption is not the test

for eligibility under § 101. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788

F.3d 1371, 1377 (Fed. Cir. 2015) ("Where a patent's claims are deemed only

to disclose patent ineligible subject matter under the *Mayo* framework, as

they are in this case, preemption concerns are fully addressed and made

moot.").

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[3] USPTO's *July 2015 Update Appendix 1: Examples* (July 30, 2015)
(available at https://www.uspto.gov/sites/default/files/documents/ieg-july-
2015-app1.pdf) (hereinafter "Examples July 2015")
[4] *See* 2014 Interim Guidance, 79 Fed. Reg. at 74625 ("a streamlined
eligibility analysis *can be used*") (emphasis added).

We are not persuaded by Appellants' argument that the Examiner erred in characterizing claim 1 as being directed to an abstract idea. In the Appeal Brief, Appellants charge that the Examiner "overgeneralizes" the claim (App. Br. 11, 15), and does not consider claim 1 as a whole (*id.* at 12, 13, 15). Yet, other than quoting the limitations of claim 1 (*see id.* at 17–18), Appellants do not adequately explain in their Appeal Brief why the Examiner erred in characterized the claim as being directed to the abstract idea of calculating a percent volume of a new product expected to be sourced from an existing product based on attribute distances, and we are not apprised of error.

Claim 1 recites five steps for introducing a new product in a target market. These steps include: (1) identifying shared attributes between the new product an a plurality of existing products in the target market; (2) calculating theoretical Dirichlet co-pentetration values between the attributes shared between the new product and at least one of the plurality of existing products, (3) calculating panelist-based actual co-penetration values between the attributes shared between the new products and at least one of the plurality of existing products, (4) correcting a model-based fair share sourcing error caused by a Dirichlet model by calculating attribute distance values based on a ratio of corresponding pairs of the theoretical and actual co-penetration values, and (5) identifying a percent volume of the new product expected to be sourced from one of the plurality of existing products based on the attribute distance values.

We agree with the Examiner (*see* Ans. 8) that claim 1 is not patentable because each of the five steps recited in claim 1 can be performed mentally by a human. In the Reply Brief, Appellants argue that the Examiner's

determination amounts to an impermissible "*per se* ban against mathematical relationships." Reply Br. 5. We disagree.

The Supreme Court has held that "mental processes . . . are not patentable, as they are the basic tools of scientific and technological work. *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972). The invention in *Gottschalk* involved "a method of programming a general-purpose digital computer to convert signals from binary-coded decimal form into pure binary form," (*id.* at 65), which the Court determined could be "done mentally through the use of [a conversion] table" and "without a computer" (*id.* at 67). The Court acknowledged that the claimed method required a general purpose computer instead of a mental implementation, and also varied the ordinary arithmetic steps that a human would use. *See id.* But mere use of a general purpose computer and novelty of the claimed steps were deemed insufficient to confer patent eligibility. Instead,the Court found that the invention could be "carried out in existing computers long in use" and also "without a computer" to be determinative of patent ineligibility. *See id.; see also CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372–73 (Fed. Cir. 2011) ("A method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101."). Like the claims in *Gottschalk*, claim 1 can be carried out on any existing "processor" long in use, and also can be performed by a person without a computer.

Appellants' Specification supports the Examiner's determination that the claims are directed to an abstract idea. *See, e.g.*, Spec. ¶¶ 1, 2, 9–15. The Specification teaches that the invention "relates generally to market research, and, more particularly, . . . to forecast[ing] new product launch sourcing." *Id.* ¶ 1. In this regard, the Specification describes a business

need to "predict the success of products introduced into one or more markets" (*id.* ¶ 2) by determining whether a new product will "steal[] buyers from competing manufacturers as hoped," or cannibalize its own buyers (*id.* ¶ 10). Market researchers recognize that known techniques for forecasting new product launch sourcing, such as fair share sourcing logic and a Dirichlet model (i.e., an improvement on fair share sourcing logic), fall short in accuracy, particularly with respect to certain brands, markets, and/or product types. *See id.* ¶¶ 11–15. To address this problem, Appellants' invention proposes a further improvement to the Dirichlet model by grounding theoretical co-penetration values with empirical values to forecast sourcing of new product launches. *Id.* ¶ 15; *see also* Reply Br. 5 (claim 1 "recites a solution to correct an error in a Dirichlet model," which "improves market estimation technologies.").

Considered in light of the Specification, the focus of the claimed advance over the prior art is directed generally to an improvement in market research, and more particularly, to an improved methodology for forecasting new product sourcing,[5] i.e., an abstract idea. *See* App. Br. 22 ("the invention on appeal pertains to market research."). Put differently, the claimed advance focuses on improving a business practice for which a computer is used in its ordinary capacity, and not on any technological advance or improvement to technology. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (the step one inquiry "asks whether the focus of the claims is on the specific asserted improvement in computer capabilities . . . or,

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[5] We note that an abstract idea can generally be described at different levels of abstraction. *See Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1240–1241 (Fed. Cir. 2016).

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instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool").

In the Reply Brief, Appellants further argue that claim 1 is not abstract because it is "inextricably tied to computer technology," analogous to the claims described in Example 1,[6] and "necessarily rooted in technology in order to overcome a problem specifically arising in the realm of computer networks,'" analogous to the claims in *DDR Holdings*.[7] Yet, claims 1 and 2 of Example 1 are directed to physically isolating a received communication on a memory sector and extracting malicious code to create a sanitized communication in a new data file, which is inextricably tied to computer technology and, thus, not an abstract idea. *See* Examples I 2. No analogous tie to computer technology is evident here. Instead, claim 1 focuses on improving the business practice of estimating sourcing for a new product, using a generic processor operating in its ordinary capacity.

Likewise, the claims do not parallel those at issue in *DDR Holdings*. There, the Federal Circuit held that the claims specify how interactions with the Internet are manipulated to yield a desired result that "overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink." *DDR Holdings*, 773 F.3d at 1258. Appellants' claims, in contrast, do not overcome any problem arising in the realm of computer networks. Instead, the claims address a problem arising in business that has been empirically observed by market researchers. *See* Spec. ¶¶ 11, 15.

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[6] *Examples: Abstract Ideas* (Jan. 27, 2015) (available at https://www.uspto.gov/sites/default/files/documents/abstract_idea_examples.pdf) (hereinafter "Examples I").
[7] *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).

Turning to step two of the *Mayo/Alice* framework, Appellants argue that even if claim 1 is directed to an abstract idea, the "correcting" limitation, as recited in claim 1, constitutes an inventive concept significantly more than the abstract idea. *See* App. Br. 18 (citing 2014 Interim Guidance, 79 Fed. Reg. at 74624). Specifically, Appellants assert that "no such correcting and/or calculating attribute distance values [have] been identified in any prior art cited by the Office." *Id.* Appellants further contend that the invention "is directed to a specific real world method, with real world effects not hereto known in science, economics, or industry" that is "far more analogous to the claim in *Diamond v. Diehr*, 450 U.S. 175 (1981) (holding a computer-implemented process for curing rubber based on calculated cure times from temperature measurements to be patent eligible) and to the claim *PNC Bank* (directed to transforming data with an authentication key) than to the intermediated settlement claim of *Alice*. App. Br. 19.

Yet to the extent Appellants maintain that the claim limitations necessarily amount to "significantly more" than an abstract idea because the claimed apparatus is allegedly novel and/or non-obvious, Appellants misapprehend the controlling precedent. A novel and nonobvious claim directed to a purely abstract idea is, nonetheless, patent-ineligible. *See Mayo*, 132 S. Ct. at 1304. *See also Diamond*, 450 U.S. 188–89 ("The 'novelty' of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the . . . categories of possibly patentable subject matter.").

Here, the step of "correcting . . . by calculating" is not significantly more than the abstract idea under step two, because it is indistinguishable

from the abstract idea itself. That is, the claimed "correcting" describes the abstract idea of improving forecasting for new product sourcing, and can be performed mentally. As such, Appellants do not provide adequate evidence or technical reasoning that claim 1 improves some existing *technological process* or solves some *technological problem* in conventional industry practice, like the claims in *Diamond*. Instead, claim 1 is aimed at improving a commonplace business practice. *See Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1334 (Fed. Cir. 2015), *cert. denied*, 136 S. Ct. 2510 (2016) (finding that the "claims recit[ed] a commonplace business method aimed at processing business information despite being applied on a general purpose computer").

In the Reply Brief, Appellants contend that claim 1 "solves a problem related to overreliance on Dirichlet techniques for an industry that predicts volumes of new products expected to be sourced from existing products in a market thereby improving that field," analogous to the USPTO's Example 3. Reply Br. 6. Yet improving market research is a *business* problem, not a *technical* problem. Example 3 is modeled after the technology described in *Research Corp. Techs., Inc. v. Microsoft Corp.*, 627 F.3d 859, 869 (Fed. Cir. 2010), involving halftone rendering. *See* Examples I 7. In *Research Corp.*, the Federal Circuit held that the claims were patent eligible because they presented an improvement to computer technology, and addressed a need in the art for accomplishing halftone rendering using a digital data processor in a simple and precise manner. *See Research Corp.*, 627 F.3d at 869–69. No such analogous improvement to computer technology is present here.

We have considered all of Appellants' arguments. But none persuades us that the Examiner erred in rejecting claim 1 and its dependent claims under 35 U.S.C. § 101.

Independent Claims 10 and 16, and Dependent Claims 11–15 and 17–23

Appellants advance the same arguments with respect to claims 10 and 16 as advanced for claim 1. *See* App. Br. 19–22; *see also* Reply Br. 4–6. Therefore, we sustain the Examiner's rejection of independent claim 10 and 16 under 35 U.S.C. § 101 for the same reasons set forth above with respect to claim 1. We also sustain the rejection of dependent claims 11–15 and 17–23, which are not argued separately.

Obviousness

Independent Claims 1, 10, and 16

We are persuaded by Appellants' argument that the Examiner erred in rejecting independent claim 1, 10, and 16 under 35 U.S.C. § 103(a) because Ehrenberg and Leeflang fail to disclose or suggest "correcting, . . . a model-based fair share sourcing error caused by a Dirichlet model by calculating attribute distance values based on a ratio of corresponding pairs of the theoretical and actual co-penetration values[,]" as recited in claim 1, and similarly recited in claims 10 and 16. App. Br. 22–28; *see also* Reply Br. 7–10. The Examiner finds that Ehrenberg teaches correcting a model-based fair share sourcing error by calculating attribute distance values based on a ratio of corresponding pairs of theoretical and actual co-penetration values. *See* Final Act. 16–17 (citing Ehrenberg 1311, 1320). However, the Examiner acknowledges that Ehrenberg does not teach the claimed "error" and "ratio," as recited by the argued limitation. *Id.* at 18. And the Examiner relies on Leeflang to cure the deficiency. *Id.* at 18–19 (citing Leeflang 221,

234, 505, 506, 517). We have reviewed the cited portions of Ehrenberg and Leeflang. Yet we find nothing that discloses or suggests "correcting," as recited in claim 1, and similarly recited in claims 10 and 16.

Ehrenberg describes how a Dirichlet model accurately predicts brand performance measures for numerous marketing applications, including launching a new brand. *See, e.g.*, Ehrenberg Abstract, 1308, 1314–16. Ehrenberg touts the Dirichlet model as accurately predicting brand performance patterns using a "few well-based assumptions," such that the observed value deviates little (e.g., less than 2 percentage points for the penetration-type percentages) from the theoretical value. *Id.* at 1311. Ehrenberg describes calibrating the Dirichlet model for a given product or service category by fitting the model to buying data observed over a base period using a number of leading brands. *Id.* at 1319–20. In particular, the buying parameters observed include category penetration, brand penetration, category buying frequency, brand buying frequency of the brand. *Id.* at 1320.

The Examiner finds that Ehrenberg's description of the Dirichlet model having little average deviation between annual observed and theoretical performance measures discloses the claimed "calculating attribute distance values . . . of the theoretical and actual co-penetration values," as recited in claim 1, and similarly recited in claims 10 and 16. *See* Final Act. 17 (citing Ehrenberg 1311). But the referenced portion is merely a promotion of the known Dirichlet model for estimating buyer behavior due to its alleged: (1) lack of systematic bias, and (2) accuracy. It has nothing to do with calculating distances relating to attributes, as required by the claim.

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The Examiner further finds that fitting or smoothing the model (i.e., the model calibration described in the section entitled "Calibrating the model") teaches the claimed correcting of a model-based fair share sourcing error caused by a Dirichlet model. *See* Final Act. 16–17. But this smoothing and fitting is not "correcting" an error of a model-based fair share sourcing error caused by a Dirichlet model, as required by claims 1, 10, and 16. Instead, it is a calibration required to use the known Dirichlet model. *See* Ehrenberg 1311 ("[t]o use the model, it has to be calibrated for the chosen product category and brand [using] four numerical inputs"); *see also id.* at 1319–20 ("Calibrating the model").

Here, we find the evidence cited by the Examiner does not adequately support the Examiner's finding that Ehrenberg describes correcting sourcing error caused by a Dirichlet model, much less correcting in the manner recited in claim 1, and similarly recited in claims 10 and 16. The Examiner's reliance on Leeflang for "disclosing that a ratio is utilized in assessing the error in the forecast accuracy" does not cure this deficiency. Final Act. 19.

Leeflang describes building models for marketing decisions. Leeflang, Title. Leefleang provides a formula for a predictive validity measure, namely, a mean absolute percentage error. *Id.* at 506. Leeflang also describes that the Dirichlet is another benchmark model. *Id.* at 517; *see also id.* at 234. But Leeflang does not disclose, and Leeflang is not relied upon for disclosing, correcting sourcing error caused by a Dirichlet model.

Therefore, we do not sustain the Examiner's rejection of independent claims 1, 10, and 16 under 35 U.S.C. § 103(a). For the same reasons, we also do not sustain the rejection of their dependent claims.

DECISION

The Examiner's rejection of claims 1–23 under 35 U.S.C. § 112, first paragraph is reversed.

The Examiner's rejection of claims 1–23 under 35 U.S.C. § 112, second paragraph is reversed.

The Examiner's rejection of claims 1–23 under 35 U.S.C. § 101 is affirmed.

The Examiner's rejection of claims 1–23 under 35 U.S.C. § 103(a) is reversed.

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

AFFIRMED