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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte NIPUN MATHUR

Appeal 2018-002583
Application 13/708,621
Technology Center 3600

Before JOSEPH A. FISCHETTI, NINA L. MEDLOCK, and CYNTHIA L. MURPHY, *Administrative Patent Judges*.

MURPHY, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellant[1] appeals from the Examiner's rejections of claims 1, 3–10, 12–16, and 18–24 under 35 U.S.C. §§ 101 and 112(a). We sustain the Examiner's rejection under 35 U.S.C. § 101 (Rejection I); and we do not sustain the Examiner's rejection under 35 U.S.C. § 112(a) (Rejection II). As at least one rejection of all of the claims on appeal is sustained, we AFFIRM.

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[1] The "Appellant" is the "applicant" appealing to the Board (35 U.S.C. § 134(a)); and the "applicant" is "the inventor, "all of the joint inventors," or "the person applying for a patent" (37 C.F.R. § 1.42). "The real party in interest in this appeal is Facebook, Inc." (Appeal Br. 2.) We have jurisdiction under 35 U.S.C. § 6(b).

BACKGROUND

The Appellant discloses a method for "pricing advertisements based on the results of auctions." (Spec. ¶ 1.)

An auction is a commercial interaction in which prospective buyers submit bid prices for purchasing an asset from a seller. (*See e.g.*, Bhatia ¶ 18.)[2] Typically, the bidder submitting the highest bid price wins the auction, and the asset is sold to the winning bidder. (*See id.*) The price the winning bidder pays for the asset (e.g., the clearing price) is based upon the prearranged terms of the auction. For example, in a "second place auction," the clearing price is based upon the second highest bid submitted to the seller. (Dilling ¶ 160.)[3]

In the context of an online-advertising auction, the "buyers" are advertisers, the "seller" is an ad-serving system, and the "asset" being sold is the display of an advertisement to a specific user. (*See* Bhatia ¶ 6.) This "asset" is created when the ad-serving system receives a request for an advertisement from a user's device. (*See id.*) Advertisers submit bid prices for the purchase of this asset, the ad-serving system conducts an auction, and the asset is sold to the highest bidder. (*See id.*)

If a social networking system is the ad-serving system, a request for the display of an advertisement can be received from the device of a specific user of the social networking system. (*See* Spec. ¶ 12.) The social networking system has information about the characteristics of this specific user (via a stored "profile" for this user) and these characteristics can be

[2] US 2010/0106613 A1, published April 29, 2010.

[3] US 2011/0131264 A1, published September 22, 2011.

matched with an advertiser's "targeting criteria." (*Id.* ¶ 4.) Thus, the asset being auctioned by the social networking system is the display of an advertisement targeted to someone with the characteristics of this specific user, or, more succinctly, a "targeted advertisement[]." (*Id.* ¶ 12.)

If an ad-exchange system (external to the social networking system) is the ad-serving system, a request for a display of an advertisement can likewise be received from a specific user's device. (*See* Spec. ¶ 22.) However, the ad-exchange system has no information about the characteristics of this specific user. (*See id.*) Thus, the asset being auctioned by the ad-exchange system is the display of a "non-targeted" advertisement to a user with unknown characteristics. (*Id.*)

Advertisers' bid prices submitted to the social networking system for targeted advertisements will understandably be higher than advertisers' bid prices submitted to the ad-exchange system for non-targeted advertisements of similar content. (*See e.g.*, Spec. ¶ 14.) It follows, therefore, that the winning bid in an internal auction conducted by the social networking system for a targeted advertisement will often be higher than the winning bid in an external auction conducted by the ad-exchange system for a non-targeted advertisement of similar content.

Thus, if a pricing model[4] compares the results of "auctions treating both targeted and non-targeted advertisements the same" (Spec ¶ 3), this comparison will usually not be commercially helpful to the social networking system. This is because such a pricing model does "not allow

[4] A "pricing model" is defined as "a method for deciding what prices to charge for a company's products or services." (https://dictionary.cambridge.org/us/dictionary/english/pricing-model (last visited November 1, 2019).

advertisement pricing to account for use of information for targeting advertisement[s]." (*Id.*)

The Appellant solves this problem by using a pricing model that takes into consideration bid prices for targeted and non-targeted advertisements in a commercially advantageous manner. (*See e.g.*, Spec. ¶ 4.)

ILLUSTRATIVE CLAIM

1. A method comprising:

[(a)] receiving, at a social networking system, a request for an advertisement to be provided to a device associated with a user of the social networking system;

[(b)] retrieving, by the social networking system, a plurality of candidate advertisements associated with a bid price and targeting criteria specifying one or more characteristics of the user stored by the social networking system in a user profile for the user;

[(c)] adjusting, by the social networking system, the bid price of each of the plurality of candidate advertisements to include a first fee for using information associated with the user of the social networking system;

[(d)] selecting, by the social networking system, a first candidate advertisement from the plurality of candidate advertisements based on the adjusted bid prices;

[(e)] determining, by the social networking system, an internal clearing price associated with the first candidate advertisement;

[(f)] sending, by the social networking system, a description of the first candidate advertisement to an external system that is separate from the social networking system and includes additional advertisements each associated with a bid price, the description including the adjusted bid price associated with the first candidate advertisement, wherein the external system conducts an external auction that includes the first candidate advertisement and the

> additional advertisements, the first candidate advertisement winning the external auction at an external clearing price;
>
> [(g)] receiving, by the social networking system, the external clearing price from the external system;
>
> [(h)] adjusting, by the social networking system, the external clearing price to include a transaction fee, wherein the adjusted external clearing price is different from the internal clearing price;
>
> [(i)] comparing, by the social networking system, the internal clearing price and the adjusted external clearing price to identify which of the internal clearing price and the adjusted external clearing price is a higher amount; and
>
> [(j)] determining, by the social networking system, a second fee that is the higher amount, the second fee for serving the first candidate advertisement.

Thus, the Appellant claims a method comprising steps (a)–(j) which result in the determination of a "fee" for serving an advertisement to "a device associated with a user of [a] social networking system." (Appeal Br., Claims App.) And, according to the Appellant, the claimed method "uses a pricing model" to determine this fee. (*Id.* at 2.)

REJECTION I — 35 U.S.C. § 101

The Examiner rejects claims 1, 3–10, 12–16, and 18–24 under 35 U.S.C. § 101 as directed to a judicial exception (i.e., an abstract idea) without significantly more. (Final Action 14.)

The *Alice* Test

In *Alice Corp. v. CLS Bank International*, 573 U.S. 208 (2014), the Supreme Court provided a two-step test to detect when an attempt is being made to patent an abstract idea in isolation. (*Id.* at 217–18.) In the first step

of the *Alice* test, a determination is made as to whether the claim at issue is "directed to" an abstract idea. (*Id.* at 218.) If the claim at issue is "directed to" an abstract idea, the second step of the *Alice* test must be performed. (*Id.*)

In the second step of the *Alice* Test, a determination is made as to whether "additional elements" in the claim, both individually and as an ordered combination, contribute "significantly more" than the abstract idea. (*Id.* at 217.) When making this determination, attention is given to whether additional elements are "well-understood," "routine," or "conventional." (*Id.* at 225.)

When an additional element in a claim is a "computer," the relevant question is not whether the claim requires the computer to accomplish a recited function. (*Id.* at 223.) Rather, "the relevant question" is whether the claim does more than simply "instruct the practitioner to implement the abstract idea" on a computer. (*Id.* at 225.) The mere recitation of a computer in the claim, and/or words simply saying "apply" the abstract idea "with a computer," do not "transform an abstract idea into a patent-eligible invention." (*Id.* at 223.) In short, the sheer introduction of a computer into the claim is not enough to "impart patent eligibility." (*Id.*)

2019 §101 Guidance

The 2019 Revised Patent Subject Matter Eligibility Guidance ("2019 §101 Guidance") provides us with a framework to follow when addressing whether a claim passes the *Alice* test for patent eligibility. (*See* Federal Register Vol. 84, No. 4, 50–57.) This framework is "[i]n accordance with judicial precedent" and consists of a two-pronged Step 2A and a Step 2B. (*Id.* at 52.)

Analysis

In the first prong of Step 2A (Prong One), we determine whether the claim "recites" an abstract idea. (2019 § 101 Guidance, 84 Fed. Reg. at 54.) The Guidance "extracts and synthesizes key concepts identified by the courts as abstract ideas," and these concepts include "[c]ertain methods of organizing human activity," and, more particularly, "fundamental economic" practices and "commercial" interactions. (*Id.* at 52.) For example, the Federal Circuit has held that "a method of price optimization in an e-commerce environment" (i.e., a pricing model) is a fundamental economic concept that constitutes an abstract idea. (*OIP Technologies, Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1360 (Fed. Cir. 2016).)

Step (a) recites "receiving, at a social networking system, a request for an advertisement to be provided to a device associated with a user of the social networking system." (Appeal Br., Claims App.) As the user is a "user of the social the social networking system," characteristics of this user are "stored by the social networking system in a user profile for the user." (*Id.*) Thus, step (a) sets forth that, with the Appellant's pricing model, the asset being "priced" is the display of a targeted advertisement to a user having these characteristics.

Step (b) recites "retrieving, by the social networking system, a plurality of candidate advertisements associated with a bid price and targeting criteria specifying one or more characteristics of the user." (Appeal Br., Claims App.) Thus, step (b) covers a scenario in which the Appellant's pricing model takes into consideration three candidate advertisements (having targeting criteria matching the characteristics of the

user), which have bid prices of $0.50, $1.00, and $0.90 associated therewith. (*See* Spec. 18.)

Step (c) recites "adjusting, by the social networking system, the bid price of each of the plurality of candidate advertisements to include a first fee for using information associated with the user of the social networking system." (Appeal Br., Claims App.) Thus, step (c) covers a scenario in which the Appellant's pricing model reduces the three bid prices ($0.50, $1.00, and $0.90) by 10%, so that they have adjusted bid prices of $0.45, $0.90, and $0.81. (*See* Spec. 18.)

Step (d) recites "selecting, by the social networking system, a first candidate advertisement from the plurality of candidate advertisements based on the adjusted bid prices." (Appeal Br., Claims App.) Thus, step (d) covers a scenario in which the Appellant's pricing model compares three adjusted bid prices ($0.45, $0.90, and $0.81), and selects the highest adjusted bid price ($0.90). (*See* Spec. ¶¶ 18–19.) With the Appellant's pricing model, the advertisement associated with this highest adjusted bid price is labeled the "first candidate advertisement."

Step (e) recites "determining, by the social networking system, an internal clearing price associated with the first candidate advertisement." (Appeal Br., Claims App.) Thus, step (e) covers a scenario in which the Appellant's pricing model labels "the second-highest adjusted bid price" ($0.81) the "internal clearing price." (Spec. ¶ 20.)

Step (f) recites "sending, by the social networking system, a description of the first candidate advertisement to an external system that is separate from the social networking system." (Appeal Br., Claims App.) Thus, step (f) sets forth that, with the Appellant's pricing model, bid prices

submitted by advertisers to an external ad-exchange system for non-targeted advertisements of similar content are taken into consideration. For example, advertisers may have submitted "bid prices of $0.25, $0.10, and $0.50" to the external ad-exchange system for non-targeted advertisements of similar content. (Spec. ¶ 23.)

Step (f) also recites that "the external system conducts an external auction that includes the first candidate advertisement and the additional advertisements." (Appeal Br., Claims App.) Thus, step (f) covers a scenario in which the Appellant's pricing model compares four bid prices—the highest adjusted bid price ($0.90) for a targeted advertisement, and three bid prices ($0.25, $0.10, and $0.50) for non-targeted advertisements of similar content. (*See* Spec.¶ 24.) This comparison can be called an "external auction," the highest amount ($0.90) can be called the winner of this auction, and the second highest amount ($0.50) can be called the "external clearing price." (Appeal Br., Claims App.) As the highest amount (the adjusted bid price of $0.90) is associated with the first candidate advertisement, "the first candidate advertisement win[s] the external auction at an external clearing price." (*Id.*)

Step (g) recites "receiving, by the social networking system, the external clearing price from the external system." (Appeal Br., Claims App.) Thus, step (g) sets forth that the Appellant's pricing model takes into consideration the external clearing price ($0.50).

Step (h) recites "adjusting, by the social networking system, the external clearing price to include a transaction fee." (Appeal Br., Claims App.) Thus, step (h) covers a scenario in which the Appellant's pricing model increases the external clearing price of $0.50 by a 10% transaction fee

to $0.55. (*See* Spec. ¶ 25.) This adjusted external clearing price ($0.55) "is different from" the internal clearing price ($0.81). (Appeal Br., Claims App.)

Step (i) recites "comparing, by the social networking system, the internal clearing price and the adjusted external clearing price" to identify which "is a higher amount." (Appeal Br., Claims App.) Thus, step (i) covers a scenario in which the Appellant's pricing model compares two clearing prices (the internal clearing price of $0.81 and the adjusted external clearing price of $0.55), and this comparison reveals that the internal clearing price ($0.81) is the higher amount. (*See* Spec. ¶ 26.)

Step (j) recites "determining, by the social networking system, a second fee that is the higher amount" and that this is the fee "for serving the first candidate advertisement." (Appeal Br., Claims App.) Thus, step (j) covers a scenario in which the Appellant's pricing model results in the price for the asset (i.e., serving the first candidate advertisement to the user) being the internal clearing price ($0.81). (*See* Spec. ¶ 28.)

A pricing model is a fundamental economic practice, and a fundamental economic practice is a certain method of organizing human activity that constitutes an abstract idea. (*See* 2019 § 101 Guidance, 84 Fed. Reg. at 52.) Thus, independent claim 1 recites an abstract idea under Prong One of Step 2A, and so we proceed to Prong Two of Step 2A.

In Prong Two of Step 2A, we determine "whether the claim as a whole integrates the recited judicial exception into a practical application of the exception." (*Id.* at 54.) In making this determination, we identify "whether there are any additional elements in the claim beyond the abstract idea," and we evaluate "those additional elements individually and in

combination to determine whether they integrate the exception into a practical application." (*Id.* at 54–55.)

As discussed above, with the Appellant's pricing model, numerical values (e.g., bid prices, clearing prices, and fees) are retrieved, adjusted, selected, compared, and determined, and independent claim 1 requires these operations to be performed "by the social networking system." (Appeal Br., Claims App.) Although the Appellant contends that independent claim 1 involves "a computer" (*id.* at 24), independent claim 1 does not recite any computer elements (e.g., a server, a processor, a database, etc.). And, although the Specification describes and diagrams an architecture in which the social networking system has "store[s]," "module[s]," and an "authorization server" (Spec. ¶ 34, *see also* Fig. 3), none of these computer components is required by independent claim 1.[5]

Independent claim 1 requires the social networking system to communicate with the user's device (to receive the "request for an advertisement") and with the external system (to send the "description" and receive the "external clearing price"). (Appeal Br., Claims App.) Independent claim 1 does not specify how this communication is accomplished, and/or an ordered arrangement of the social networking system relative to the user's device and/or the external system.

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[5] This is not to say that, if the diagrammed architecture of the social networking system was recited in the claim, this would necessarily constitute a practical application. In this regard, we note that the stores are described in terms of the information they store (*see* Spec. ¶¶ 35–39); the modules are described in terms of the operations they perform (*see id.* ¶¶ 40–44, 46–55); and the authorization server simply "enforces one or more privacy settings of the users of the social networking system" (*id.* ¶ 45).

Independent claim 1 also requires the external system to "include[] additional advertisements each associated with a bid price" and to "conduct[] an external auction." (Appeal Br., Claims App.) However, independent claim 1 does not specify computer components that allow the external system to include (e.g., store) these additional advertisements and/or retrieve them to conduct the external auction. (*See* Spec. ¶¶ 21, 22, 31, 50, 51.) And the Specification only describes the external system as "a system that facilitates bidding, buying, selling, or some combination thereof, of ad objects from advertisers to systems delivering advertisements associated with the ad objects to users." (*Id.* ¶ 31, reference numeral omitted.)

Thus, insofar as computer/network components are implicated by the recitation of a social networking system, a user's device, and/or an external system, independent claim 1 only asks these computer/network components to "apply" a fundamental economic practice (i.e., the Appellant's pricing model) which is an abstract idea. Independent claim 1 does not, therefore, integrate the Appellant's pricing model into a practical application under Prong Two of Step 2A, and so we proceed to Step 2B.

In Step 2B, we evaluate whether the additional elements recited in the claim, individually or in combination, are well-understood, conventional, or routine, and thus do not amount to "significantly more" than the abstract idea itself. (2019 § 101 Guidance, 56.) If a claim's additional elements consist of a conventional arrangement of conventional computer components, this does not amount to "significantly more," and the claim fails the *Alice* Test for patent eligibility. (*See id.*)

As discussed above, independent claim 1 does not recite any computer/network components, does not require an ordered arrangement of the social networking system relative to the user's device and/or the external device, and does not specify how communication is accomplished therebetween. Unrecited computer/network components cannot be relied upon to add "significantly more" to the claimed method.

Moreover, the Specification describes the social networking system as having conventional computer/network components which perform conventional computer activities (e.g., receiving, retrieving, adjusting, selecting, determining, sending, comparing, etc.). (*See* Spec. ¶¶ 31–35, 65–68; Fig. 3.) The Specification describes the social networking system as arranged in a conventional manner relative to the user's device and the external system. (*See id*. ¶ 30, Fig. 2.) And the Specification describes the social networking system as communicating with the user's device and the external system in a conventional manner. (*See id*. ¶ 33, 50, Fig. 2.)

Thus, we agree with the Examiner that claim 1 recites a judicial exception (i.e., an abstract idea) without significantly more.

The Appellant's Arguments

The Appellant contends that the claimed method provides "improvements" to "[c]onventional advertisement pricing models." (Appeal Br. 26.) We do not necessarily disagree with this contention. The problem is that a pricing model, even an improved pricing model, is a fundamental economic practice which is still an abstract idea. And even a "brilliant" abstract idea "does not by itself satisfy the § 101 inquiry." (*Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013).)

The Appellant contends that the claimed method does not merely recite the outcome of its pricing model (the fee for serving a targeted advertisement), but rather a very specific way of reaching this outcome. (*See* Appeal Br. 23.) Again, we do not necessarily disagree with this contention. Independent claim 1 recites several steps requiring numerical values to be calculated, compared, and selected in a specific way. But these arithmetical operations stem from the economic theory underlying the Appellant's pricing model, as opposed to the hardware/software used as a tool to implement this economic theory.

The Appellant argues that, per the Federal Circuit's holding in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), a claim addressing an Internet-centric problem is patent eligible. (*See* Appeal Br. 28.) In this regard, the Appellant points out that "online social networks did not exist prior to the [I]nternet." (Appeal Br. 28.) And, according to the Appellant, "the problems addressed by the claims are ones that arise uniquely in the context of the Internet (e.g., there is no analogous way to implement the claims using print media)." (*Id.*)

We are not persuaded by this argument because, even if the claimed method is performed uniquely in the context of the Internet, this alone does not render it patent eligible. "[N]ot all claims purporting to address Internet-centric challenges are eligible for patent." (*DDR*, 773 F.3d at 1258.) In *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014), for example, the fact that an advertising method "was previously unknown and never employed on the Internet before" did not render the claims patent eligible. (*Id.* at 714.)

The Appellant argues that, per *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016), a technical improvement can come from the non-conventional arrangement of conventional computer/network components. (*See* Appeal Br. 25–26.) The Appellant asserts that "the claimed pricing method is a specific result of the claimed network relationship between the social networking system and the external system motivated by access to data." (Reply Br. 5.)

We are not persuaded by this argument because independent claim 1 merely requires the social networking device to receive information from the user's device, to send information to the external system, and to receive information from the external system. There is no claimed network relationship, or special arrangement of, the social networking system relative to the user's device. As discussed above, the Specification describes the social networking system as arranged in a conventional manner relative to the external system. (*See* Spec. ¶¶ 30, 33, 50; Fig. 2.)

As for the "claimed pricing model" being "motivated by access to data" (Reply Br. 5), this "access to data" (i.e., bid prices for non-targeted advertisements of similar content) is rooted in the economic theory underlying the Appellant's pricing model. Likewise, insofar as it is unconventional for a social networking system to send information to, and/or receive information from, an external ad exchange, this equates to a non-conventional commercial interaction, not an innovative arrangement of computer systems.

The Appellant argues, per *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016), an improvement in computer technology is not limited to improvements in the operation of a computer or

computer network. (*See* Appeal Br. 24.) According to the Appellant, an improvement in computer technology "may also be claimed as a set of 'rules' (basically mathematical relationships) that improve computer-related technology by allowing computer performance of a function not previously performable by a computer." (*Id.*) And the Appellant seems to imply that "rules" in its claimed pricing model allow "a computer to perform a function not previously performable by a computer." (*Id.*)

We are not persuaded by this argument because the prior art of record shows that calculating prices associated with online advertising was previously performable by a computer. (*See e.g.*, Dilling, ¶¶ 3, 6.)[6] Additionally, the alleged "rules" or "mathematical relationships" recited in independent claim 1 are simple and straightforward arithmetical operations. For example, as acknowledged by the Appellant, the "determining" step (j) requires only "compar[ing] two numbers and then select[ing] the higher one." (Reply Br. 3.)[7]

The Appellant argues that "the claimed method benefits both the social networking system and external ad exchange by allowing the social networking system to serve ads to users of the external ad exchange and vice

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[6] In contrast, in *McRO*, the claimed improvement was "allowing computers to produce 'accurate and realistic lip synchronization and facial expressions in animated characters' that previously could only be produced by human animators." (*McRO*, 837 F.3d at 1313.)

[7] In contrast, in *McRO*, the Federal Circuit specifically distinguished "rules that only evaluate individual phonemes" from the claimed rules that required the evaluation of "sub-sequences," the generation of "transition parameters," and the application of "transition parameters to create a final morph weight set." (*See McRO,* 837 F.3d at 1311, 1314.)

versa." (Appeal Br. 24; *see also* Reply Br. 4–6.) However, in independent claim 1, there is no mention of any user other than "a user of the social networking system," and there is no mention of the external system serving ads to this or any other user. As such, independent claim 1 does not require the social networking system to serve ads to users of the external system; and does not require the external system to serve ads to users of the social networking system.

The Appellant argues that the steps of independent claim 1 are performed "each time an ad request is received in real-time in order to determine what ad is served to the user and at what price to the advertiser." (Appeal Br. 23.) However, independent claim 1 does not specify that the listed steps must be performed in real-time. Moreover, the Specification does not appear to have any written description of real-time performance of steps (a)–(j) in independent claim 1.

Thus, after careful consideration of the Appellant's arguments, we are unpersuaded that the Examiner incorrectly concludes that independent claim 1 recites a judicial exception (i.e., an abstract idea) without significantly more.

Summary

We sustain the Examiner's rejection of independent claim 1 under 35 U.S.C. § 101. Claims 1, 3–10, 12–16, and 18–24 are argued as a group for this rejection (*see* Appeal Br. 25, 28) and thus the rest of the claims on appeal fall with claim 1.[8]

[8] "When multiple claims subject to the same ground of rejection are argued as a group or subgroup by appellant, the Board may select a single claim from the group or subgroup and may decide the appeal as to the ground of

REJECTION II — 35 U.S.C. § 112

The Examiner rejects claims 1, 3–10, 12–16, and 18–24 under 35 U.S.C. § 112(a) as failing to comply with the written description requirement. (Final Action 3.)

The Written Description Requirement

"The test for the sufficiency of the written description 'is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." (*Vasudevan Software, Inc. v. MicroStrategy, Inc.*, 782 F.3d 671, 682 (Fed. Cir. 2015).) "[I]t is unnecessary to spell out every detail of the invention in the specification; only enough must be included to convince a person of skill in the art that the inventor possessed the invention." (*LizardTech Inc.* v. *Earth Resource Mapping Inc.*, 424 F.3d 1336, 1345 (Fed. Cir. 2005).)

The 2019 § 112 Guidance

The "Examining Computer-Implemented Functional Claim Limitations" Guidance (2019 § 112 Guidance) provides us with a framework to follow when addressing "functional language" that is "used to claim computer-implemented inventions." (Federal Register Vol. 84, No. 4, 57.) Even if a claim is not construed as having means-plus-function limitations, "computer-implemented functional claim language must still be evaluated for sufficient disclosure" under the written description requirement of 35 U.S.C. § 112. (*Id.* at 61.)

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rejection with respect to the group or subgroup on the basis of the selected claim alone." (37 C.F.R. § 41.37(c)(1)(iv).)

Analysis

Our analysis of whether independent claim 1 complies with the written description requirement begins with a comparison of "the scope of the claim with the scope of the description" to determine whether the Appellant had possession of the claimed invention. (2019 § 112 Guidance, 84 Fed. Reg. at 61.) "The level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology." (*Id.*) For example, a claimed genus can be supported by the disclosure of a species in the specification, "so long as disclosure of the species is sufficient to convey to one skilled in the art that the inventor possessed the subject matter of the genus." (*Hynix Semiconductor Inc.* v. *Rambus Inc.*, 645 F.3d 1336, 1352 (Fed. Cir. 2011).)

The Examiner's rejection is focused on "determining" steps (e) and (j) of independent claim 1. (*See* Final Action 5–6.) Step (e) recites "determining, by the social networking system, an internal clearing price associated with the first candidate advertisement." (Appeal Br., Claims App.) The Specification describes the internal clearing price being "set at the adjusted bid price of the candidate ad object having the second highest adjusted bid price," or, alternatively, "set as the second highest adjusted bid price incremented by a specified value (e.g., 1 cent)." (Spec. ¶ 20.)

As acknowledged by the Appellant, "the claim does not limit itself to particular ways of determining a clearing price" (Reply Br. 2), and can, therefore, be viewed as claiming a generic determination of the internal clearing price (*see* Final Action 5). The Specification, on the other hand, discloses only two ways for the determination of the internal clearing price.

The question becomes, therefore, whether the two disclosed ways of determining the internal clearing price are sufficient to convey to one of ordinary skill in the art that the inventor possessed (at the time of filing) a generic determination of the internal clearing price. Here, the answer is yes, due to the scope/nature of the claim (i.e., it is directed to a pricing model), and the simplicity/predictability of setting a clearing price. According to the Appellant, "[a] 'clearing price' is a well-known thing in this space, and the particular method of determining a clearing price is not the crux of novelty in these claims." (Reply Br. 2–3.)

As for step (j) of independent claim 1, it recites "determining, by the social networking system, a second fee that is the higher amount, the second fee for serving the first candidate advertisement." (Appeal Br., Claims App.) The Specification states that "if the adjusted external clearing price is less than the internal clearing price, the social networking system determines the fee is the internal clearing price." (Spec. ¶ 27, reference numerals omitted). As such, the Specification sufficiently describes "compar[ing] two numbers and then select[ing] the higher one," which, according to the Appellant "is what this limitation recites." (Reply Br. 3.)

Thus, the Examiner does not adequately establish that independent claim 1 fails to comply with the written description requirement.

Summary

We do not sustain the Examiner's rejection of independent claim 1 under 35 U.S.C. § 112(a). The Examiner's rejection of claims 3–10, 12–16, and 18–24 relies on the same reasoning, and, thus, we also do not sustain the Examiner's rejection under 35 U.S.C. § 112(a) for the rest of the claims on appeal.

CONCLUSION

Claims Rejected	Basis	Affirmed	Reversed
1, 3–10, 12–16, 18–24	§ 35 U.S.C. § 101 (judicial exception)	1, 3–10, 12–16, 18–24	
1, 3–10, 12–16, 18–24	§ 35 U.S.C. § 112(a) (written description)		1, 3–10, 12–16, 18–24
Overall Outcome		1, 3–10, 12–16, 18–24	

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