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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/925,035	06/24/2013	Danielle Barbieri	3716.001US1	6131

21186 7590 04/02/2018

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ART UNIT	PAPER NUMBER
3688	

NOTIFICATION DATE	DELIVERY MODE
04/02/2018	ELECTRONIC

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DANIELLE BARBIERI and BRIAN LAWLER[1]

Appeal 2016-008411
Application 13/925,035
Technology Center 3600

Before BRADLEY W. BAUMEISTER, BETH Z. SHAW, and JON M. JURGOVAN, *Administrative Patent Judges*.

BAUMEISTER, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's Non-Final Rejection of claims 1, 3–12, and 14–23. App. Br. 1.

Claims 1, 3–12, and 14–23 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 3–4.[2]

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[1] Appellants list Circupon as the real party in interest. Appeal Brief 2, filed November 4, 2015 ("App. Br."); Revised Appeal Brief 2, filed March 3, 2016 ("Revised App. Br.").

[2] Rather than repeat the Examiner's positions and Appellants' arguments in their entirety, we refer to the above-mentioned Appeal Brief, as well as the following documents, for their respective details: the Final Action mailed August 4, 2015 ("Final Act."); the Examiner's Answer mailed July 5, 2016 ("Ans."); and the Reply Brief filed September 6, 2016 ("Reply Br.").

Claims 1, 3, 5–12, 14, and 16–23 stand rejected under 35 U.S.C. § 102(a)(1) as anticipated by Moss et al. (US 2005/0160014 A1; published July 21, 2005) (hereinafter "Moss"). Final Act. 4–42.

Claims 4 and 15 stand rejected under 35 U.S.C. § 103(a) as obvious over Moss and Wadell et al. (US 2014/0095285 A1; published April 3, 2014) (hereinafter "Wadell"). Final Act. 43–45.

We have jurisdiction under 35 U.S.C. § 6(b).

We Affirm-in-Part.

Pursuant to our discretionary authority under 37 C.F.R. § 41.50(b), we newly reject claim 11 under 35 U.S.C. § 112(a) (pre-AIA 35 U.S.C. § 112, ¶ 1), and we newly reject claims 1, 3, 5–10, 12, 14, and 16–23 under 35 U.S.C. § 112(b) (pre-AIA 35 U.S.C. § 112, ¶ 2).

THE INVENTION

Appellants describe the present invention as follows:

> Techniques for generating matchups of sale deals and coupon deals based on identifying sale deals and coupon deals that have matching brands and overlapping, and non-expired validity periods are described. For example, deal data that pertains to a plurality of deals including a sale deal published in a circular and a coupon deal is received. A sale brand identification and a coupon brand identification are identified based on the deal data. A first set of deal data that includes the sale brand identification and corresponds to the sale deal, and a second set of deal data that includes the coupon brand identification and corresponds to a coupon deal are determined based on the deal data. A matchup of the sale deal and the coupon deal is generated, using at least one computer processor, based on matching the sale brand identification and the coupon brand identification, detecting an indication of a sale deal type in the first set of deal data and an indication of a coupon deal type

in the second set of data, and determining that a sale deal validity period and a coupon validity deal period overlap and have not expired, the sale deal validity period being calculated based on the first set of deal data and the coupon deal validity period being calculated based on the second set of deal data.

Abstract.

CLAIM 11

Claim 11 is reproduced below with added emphasis:

11. A method comprising:

receiving, at a matching system, at least one of a brand identification, a store identification, a product identification, or a product category identification;

generating a favorites list that includes the at least one of the brand identification, the store identification, the product identification, or the product category identification;

selecting, using the favorites list, a particular matchup of a sale deal and a coupon deal *from a plurality of matchups* of sales deals and coupon deals based on determining that the at least one of the brand identification, the store identification, the product identification, or the product category identification included in the favorites list corresponds to a portion of deal data that pertains to the particular matchup; and

presenting the particular matchup in a personal circular, the personal circular including a user interface that displays at least one of a shopping list, a sale deal, a coupon deal, the matchup, or the favorites list, one or more modules incorporated into the matching system to specifically[]configure the matching system to perform the receiving, generating, selecting, and presenting, the one or more module implemented by one or more hardware processors of the matching system.

App. Br. 42–43.

The Patent Ineligible Subject Matter Rejection

The Examiner determines that all of the claims, including claim 11, are directed to an abstract idea based upon the following rationale:

> Claims 1, 3–12 and 14–23 are directed to the abstract idea of crawling price information from weekly circulars and collecting data from brand specific coupons then displaying the lowest valid price. The inventive concept is a fundamental economic practice that organizes human coupon searching for the economic purpose of saving money and reducing the time it takes to find the lowest price, which merely automates the long standing practice of searching for the lowest price using sales and coupons. For example, *it is traditional to find a combinable sale deal or a coupon deal by a person manually searching the circulars or any other available sources of coupons or other discounts, which is time consuming and tedious so the applicant seeks to merely automate this traditional process using generic computers.*

Final Act. 3 (emphasis added). The Examiner also determines that the claims do not include additional elements that are sufficient to amount to significantly more than the judicial exception. *Id.* at 3–4.

Appellants present multiple arguments as to why the Examiner has not established that the concept of crawling price information from weekly circulars and collecting data from brand specific coupons, then displaying the lowest valid price, constitutes an abstract idea. App. Br. 14; *see generally id.* at 13–30. For reasons explained below in the Conclusions section of this Opinion, we only address the section 101 rejection as it pertains to claim 11.

In determining whether the claims set forth patent-eligible subject matter under 35 U.S.C. § 101, we first must determine whether the claims at issue are directed to laws of nature, natural phenomena, or abstract ideas. *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 714 (Fed. Cir. 2014). In

considering whether a claim is directed to an abstract idea, we acknowledge, as did the Supreme Court, that "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012). We therefore look to whether the claims focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).

If the claims are directed to an abstract idea, we then must consider whether the claim contains an element or a combination of elements that is sufficient to transform the nature of the claim into a patent-eligible application. *Ultramercial*, 772 F.3d at 714; *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014).

> In applying step two of the *Alice* analysis, we must "determine whether the claims do significantly more than simply describe [the] abstract method" and thus transform the abstract idea into patentable subject matter. We look to see whether there are any "additional features" in the claims that constitute an "inventive concept," thereby rendering the claims eligible for patenting even if they are directed to an abstract idea. Those "additional features" must be more than "well-understood, routine, conventional activity."

Intellectual Ventures I LLC v. Erie Indem. Co., 850 F.3d 1315, 1328 (Fed. Cir. 2017) (citations omitted).

"[C]laims [that] merely require generic computer implementation[] fail to transform [an] abstract idea into a patent-eligible invention." *Id.* (first and fourth alterations in original) (quoting *Alice*, 134 S. Ct. at 2357).

Turning to the arguments as they pertain to claim 11, we need not decide whether the act of web crawling constitutes an abstract idea. Web crawlers aside, it is sufficient that the following steps constitute a method of organizing human activity, and more particularly, a method relating to tracking or organizing information (*see* MPEP 2106.04(a)(2) Part (II)):

receiving information including at least one of a brand identification, a store identification, a product identification, or a product category identification;

generating a favorites list that includes at least one of a brand identification, a store identification, a product identification, or a product category identification;

selecting, using the favorites list, a particular matchup of a sale deal and a coupon deal from a plurality of matchups of sales deals and coupon deals based on determining that the at least one of the brand identification, the store identification, the product identification, or the product category identification included in the favorites list corresponds to a portion of deal data that pertains to the particular matchup; and

presenting the particular matchup in a personal circular, the personal circular including at least one of a shopping list, a sale deal, a coupon deal, the matchup, or the favorites list.

Appellants acknowledge in their Specification that it was traditional for people to manually search sale deals and coupon deals and that people sought to combine these deals when possible. Spec. ¶ 3. Appellants' invention entails using computer networks and web crawlers to automate this manual activity so that the data gathering, sorting, matching, and compiling would not be time consuming and tedious. *Id.*; *see also* Spec. ¶ 7

("The subject matter described herein may allow a discount matching system (also 'system') to generate combinations (also 'matchups') of deals offered by retailers, manufacturers, suppliers, vendors of sale and coupon data etc. based on determining that certain deals may be combined (or matched)").

Furthermore, Appellants' arguments do not persuade us that the method of claim 11 requires anything more than implementation on generic computer components. As such, we understand Appellants' invention to use generic computers in their ordinary manner to improve a manual process—not an improvement to the operation of a computer. Such a use of generic computer components does not add significantly more to the abstract idea of gathering, sorting, matching, and compiling information.

> Though lengthy and numerous, the claims do not go beyond requiring the collection, analysis, and display of available information in a particular field, stating those functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology. The claims, defining a desirable information-based result and not limited to inventive means of achieving the result, fail under § 101.

Electric Power Group, LLC v. Alstom S.A., 830 F.3d 1350, 1351 (Fed. Cir. 2016).

Accordingly, we sustain the rejection of claim 11 under 35 U.S.C. § 101 for being directed to patent-ineligible subject matter.

The Anticipation Rejection

The Examiner finds that Moss discloses every limitation of claim 11. Final Act. 20–22. The Examiner specifically cites paragraph 269 of Moss for teaching the limitation, "selecting, using the favorites list, a particular matchup of a sale deal and a coupon deal from a plurality of matchups of sales deals and coupon deals." Final Act. 21 (emphasis omitted).

Appellants argue that Moss does not disclose this selecting limitation:

> [I]ndependent claim 11 recites, in part,
>
> ***selecting,*** using the favorites list, ***a particular matchup of a sale deal and a coupon deal from a plurality of matchups of sales deals and coupon deals*** based on determining that the at least one of the brand identification, the store identification, the product identification, or the product category identification included in the favorites list corresponds to a portion of deal data that pertains to the particular matchup.
>
> *Moss*, in its entirety, is silent with respect to a plurality of matchups of sale deals and coupon deals. Moreover, *Moss*, in its entirety, does not discuss "***selecting,*** using the favorites list, ***a particular match up of a sale deal and a coupon deal from a plurality of matchups of sales deals and coupon deals***," wherein the selecting of the particular matchup is selected "based on determining that the at least one of the brand identification, the store identification, the product identification, or the product category identification included in the favorites list corresponds to a portion of deal data that pertains to the particular matchup," as claimed. Accordingly, *Moss* fails to disclose at least this claim element of independent claim 11.

App. Br. 35–36.

In the Answer, the Examiner re-explains why Moss discloses selecting a matchup using a favorites list. Ans. 10. We agree. *See, e.g.*, Moss, ¶¶ 241, 269, 272; Fig. 26. But we understand Appellants to be arguing something slightly different. We understand Appellants to be arguing that claim 11 more particularly requires two steps: first creating a plurality of matchups of sales deals and coupon deals without the aid of the favorites list, and next using the favorites list to select a particular matchup from the larger universe of matchups that was already created.

The Examiner does not explain how Moss teaches this more detailed method step. Accordingly, we do not sustain the Examiner's rejection of claim 11 under 35 U.S.C. § 102(a)(1).

New Rejection for Lacking Adequate Written Description

Section 112(a) of the patent laws reads, in part, as follows:

> (a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

35 U.S.C. § 112(a) (pre-AIA § 112, ¶ 1).

> The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language. . . . The content of the drawings may also be considered in determining compliance with the written description requirement.

In re Kaslow, 707 F.2d 1366, 1375 (Fed. Cir. 1983) (citations omitted).

As originally filed, claim 11 initially recited, in relevant part, "identifying, using a favorites list, a matchup of a sale deal and a coupon deal based on determining . . . ." Subsequent to filing the original Specification, Appellants amended claim 11 to more narrowly recite "selecting, ~~identifying,~~ using the favorites list, a <u>particular</u> matchup of a sale deal and a coupon deal <u>from a plurality of matchups of sales deals and coupon deals</u> based on determining . . . ." *See* Amendment and Response Under 37 C.F.R. § 1.111 (filed June 15, 2015).

Appellants' originally filed Specification sets forth various example embodiments of the invention. One of those example embodiments discusses using a favorites list for performing matchups:

> In some example embodiments, the system may provide a user the choice to automatically receive sales, coupon, and matchup alerts for the stores, brands, or products preferred by the user. The user may provide the system the identifications of one or more "favorites", such as brand names, categories of products, or stores, about which the user is interested to receive sale and discount notifications. In some example embodiments, the system may periodically (e.g., hourly, daily, or weekly) communicate recently announced sales, new coupons, and new matchups to a user based on the list of favorites provided by the user. Alternately, or additionally, the system may notify the user of new sales, discounts, or matchups as soon as the system identifies the new deals or matchups. This information, directed to enhancing a user's shopping experiences and to saving the user money, may be presented as part of a personal circular (also a "pircular").

Spec. ¶ 27.

This portion of the Specification addressing the embodiment that uses a favorites list does not additionally mention selecting a particular matchup based on a plurality of matchups. The only portion of the Specification that addresses this latter concept is the portion addressing a different embodiment where matchups are based on receiving user-input queries:

> In some example embodiments, upon receiving a query (e.g., a search request from a user), *the system may, based on the query, identify and present the matchup as part of a user interface of a search application*. The interface may include at least one of a visual representation of the sale deal and the coupon deal, the sale deal description and the coupon deal description, a matchup list container to store the matchup, a first interface portion to initiate sharing the matchup, or a second interface portion to initiate the transmittal of a communication

> pertaining to the matchup. In certain example embodiments, after receiving the query, the system may generate, based on parsing the query, a query keyword token. Then, *the system may identify a matchup (from a plurality of matchups) based on determining that the query keyword token corresponds to at least one of a matchup brand* (a sale deal brand or a coupon deal brand), a product identification, a product category, or a product subcategory included in the matchup, and based on determining that the sale valid-to date and the coupon valid-to date have not passed. Upon identifying the matchup, the system may display the matchup in response to the query.

Spec. ¶ 26 (emphasis added).

As such, the originally filed Specification does not reasonably convey to the artisan that at time of the original filing, Appellants had possession of the idea of using a favorites list to select a particular matchup from a plurality of matchups of sales deals and coupon deals, as recited in amended claim 11. Therefore, pursuant to our discretionary authority under 37 C.F.R. § 41.50(b), we newly reject claim 11 under 35 U.S.C. § 112(a) (or pre-AIA § 112, ¶ 1) as lacking adequate written description.

CLAIMS 1, 3–5, 7–9, 22, and 23

Independent claim 1, reproduced below with added emphasis, is illustrative of claims 3–5, 7–9, 22, and 23:

> 1. A method, comprising:
>
> receiving, at a matching system, deal data that pertains to a plurality of deals including a sale deal published in a circular and a coupon deal from one or more crawlers;
>
> generating a first plurality of key-value pairs pertaining to the sale deal based on the deal data, each key-value pair of the first plurality of key-value pairs pertaining to the sale deal including an attribute that describes a characteristic of the sale

deal and a value of the attribute that describes the characteristic of the sale deal;

generating a second plurality of key-value pairs pertaining to the coupon deal based on the deal data, each key-value pair of the second plurality of key-value pairs pertaining to the coupon deal including an attribute that describes a characteristic of the coupon deal and a value of the attribute that describes the characteristic of the coupon deal;

identifying a sale brand identification based on the first plurality of key-value pairs pertaining to the sale deal and a coupon brand identification based on the second plurality of key-value pairs pertaining to the coupon deal; and

generating a matchup of the sale deal and the coupon deal, including a sale deal description and a coupon deal description, based on

matching the sale brand identification and the coupon brand identification,

detecting an indication of a sale deal type based on the first plurality of key-value pairs and an indication of a coupon deal type based on the second plurality of key-value pairs, and

determining that a sale deal validity period and a coupon validity deal period overlap and have not expired, the sale deal validity period being calculated based on the first plurality of key-value pairs, and the coupon deal validity period being calculated based on the second plurality of key-value pairs, one or more modules incorporated into the matching system to specifically-configure the matching system to perform at least the receiving, generating, identifying, matching, detecting, and determining, the one or more module implemented by one or more hardware processors of the matching system.

App. Br. 39–40.

Appellants' Specification explains that a receiver module 202 receives deal data that pertains to a plurality of deals, such as a sale deal or a coupon

deal. Spec. ¶ 42. "The deal data received using a crawler 118 may be unstructured (e.g., in the form of HTML text)." *Id.*; *see also* FIG. 3 (depicting unstructured deal data 302).

According to Appellants' Specification,

> The identifier module 204 may identify, based on the received unstructured deal data 302, a brand identification and may determine that a first set of deal data (e.g., a certain portion of the received unstructured deal data 302) corresponds to (or includes) the brand identification. *The identifier module may store the brand identification as part of a key-value pair 312* in a brand dictionary, for example, hosted by database 338. The identifier module 204 may also store a part of or the entire first set of the deal data *as part of* another key-value pair 314 in the database 338. The key value pairs 312 and 314 are stored in the database 338 as part of a document that is associated with (or pertains to) the brand identification or the first set of deal data, or both.

Spec. ¶ 64 (emphasis added); *see also* FIG. 3 (depicting structured deal data 310 including key-value pairs 312, 314).

Figure 4 of Appellants' Specification likewise depicts a series of steps wherein deal data is received (step 402); sale brand identification and coupon brand identification is identified "based on the deal data" (step 404); and, subsequently, a first set of deal data corresponding to a sale deal, as well as a second set of deal data corresponding to a coupon deal, is determined "based on the deal data" (step 406). That is, Figure 4 also indicates that the data of the key-value pairs *corresponds to* the sale brand identification data and to the coupon brand identification data. But this identification data is "based on" the unstructured deal data—not on the key-value pairs.

Appellants' Specification states that the received deal data can be structured, as opposed to unstructured. Spec. ¶¶ 42, 43. But this alternative

format of the deal data does not negate the fact that the identification data is identified based on the received deal data, as opposed to a key-value pair. The key-value pair is the structured resultant data, data of which the sale brand identification data and the coupon brand identification data are a part.

Claim 1 recites, though, that the sale brand identification data, as well as the coupon brand identification data is *based on* respective first and second pluralities of key-value pairs. As such, this claim language effectively requires that the identification data be identified based on itself—the identified data.

Such an identification process is circular. One of ordinary skill would not be reasonably apprised of how the identification data can be *based on* respective pluralities of key-value pairs when the key-value pairs, in turn, are made of portions of data after that data has been identified. As such, one of ordinary skill in the art would not be reasonably apprised of the metes and bounds of claim protection being sought. *See* 35 U.S.C. § 112(b) ("The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention").

Pursuant to our discretionary authority under 37 C.F.R. § 41.50(b), then, we newly reject claim 1 under 35 U.S.C. § 112(b) (or pre-AIA § 112, ¶ 2) as being indefinite. We likewise reject claims 3–5, 7–9, 22, and 23, which depend from independent claim 1, on the same basis.

CLAIM 10

Independent claim 10 is reproduced below with added emphasis:

10. A method comprising:

receiving, at a matching system, *deal data* that pertains to a plurality of deals including a sale deal published in a circular and a coupon deal from one or more crawlers;

segmenting from the deal data,

based on identifying within the deal data a sale brand identification and a sale deal type, *a first set of data that corresponds to the sale deal* and,

based on identifying within the deal data a coupon brand identification and a coupon deal type, *a second set of data that corresponds to the coupon deal*;

determining,

based on the first set of data, a sale valid-from date, a sale valid-to date, and a sale validity period that starts at the sale valid-from date and ends at the sale valid-to date, and

based on the second set of data, a coupon valid-from date, a coupon valid-to date, and a coupon validity period that starts at the coupon valid-from date and ends at the coupon valid-to date; and

generating, using at least one computer processor, a matchup of the sale deal and the coupon deal including a sale deal description and a coupon deal description based on

matching the sale brand identification and the coupon brand identification,

determining that the sale validity period and the coupon validity period have a common time period, and

determining that the sale valid-to date and the coupon valid-to date have not passed, one or more modules incorporated into the matching system to specifically[]configure the matching system to perform the receiving, segmenting, determining, generating, and

> matching, the one or more module implemented by one or more hardware processors of the matching system.

App. Br. 41–42.

Claim 10 recites that the deal data pertains to sales deals and coupon deals. Claim 10 also recites that first and second sets of data is identified within and segmented from the sales deal data and coupon deal data. As such, claim 10 indicates the first and second sets of data constitute the identified, structured data of the key-value pairs, as explained further in the analysis of claim 1.

Claim 10 then sets forth the step of "determining . . . a sale valid-from date, a sale valid-to date, and a sale validity period that starts at the sale valid-from date and ends at the sale valid-to date," all of which data is "based on the first set of data." Claim 10 also sets forth "determining . . . a coupon valid-from date, a coupon valid-to date, and a coupon validity period that starts at the coupon valid-from date and ends at the coupon valid-to date," all of which data is "based on the second set of data."

In summary, the determining step of claim 10 recites a circular process of determining data based upon that same data after it has been determined. As in the case of claim 1, one of ordinary skill would not be reasonably apprised of how the determined data can be *based on* respective first and second sets of data when these sets of data, in turn, are made of portions of data after that data has been determined. As such, one of ordinary skill in the art would not be reasonably apprised of the metes and bounds of claim protection being sought.

Pursuant to our discretionary authority under 37 C.F.R. § 41.50(b), then, we newly reject claim 10 under 35 U.S.C. § 112(b) (or pre-AIA § 112, ¶ 2) as being indefinite.

CLAIM 12

Independent claim 12 is reproduced below with added emphasis:

12. A matching system comprising:

a computer memory including a database;

one or more hardware processors; and

one or more modules incorporated into the matching system, the one or more modules implemented by the one or more hardware processors of the matching system, the one or more modules to specially-configure the matching system to:

receive deal data that pertains to a plurality of deals including a sale deal published in a circular and a coupon deal from one or more crawlers;

generate a first plurality of key-value pairs pertaining to the sale deal based on the deal data, each key-value pair of the first plurality of key-value pairs pertaining to the sale deal including an attribute that describes a characteristic of the sale deal and a value of the attribute that describes the characteristic of the sale deal;

generate a second plurality of key-value pairs pertaining to the coupon deal based on the deal data, each key-value pair of the second plurality of key-value pairs pertaining to the coupon deal including an attribute that describes a characteristic of the coupon deal and a value of the attribute that describes the characteristic of the coupon deal;

identify a sale brand identification based on the first plurality of key-value pairs pertaining to the sale deal and a coupon brand identification based on the second plurality of key-value pairs pertaining to the coupon deal; and

generate a matchup of the sale deal and the coupon deal, including a sale deal description and a coupon deal description, based on

matching the sale brand identification and the coupon brand identification,

> detecting an indication of a sale deal type based on the first plurality of key-value pairs and an indication of a coupon deal type based on the second plurality of key-value pairs, and
>
> determining that a sale deal validity period and a coupon validity deal period overlap and have not expired, the sale deal validity period being calculated based on the first plurality of key-value pairs, and the coupon deal validity period being calculated based on the second plurality of key-value pairs, one or more modules incorporated into the matching system to specifically[]configure the matching system to perform the receiving, generating, identifying, matching, detecting, and determining, the one or more module implemented by one or more hardware processors of the matching system.

App. Br. 43–44.

The "identify" limitation of claim 12 sets forth a circular process of identifying brand identification data based upon key-value pairs that, in turn, are comprised of the brand identification data after it has been identified.

For reasons similar to those already explained in relation to the other independent claims, we exercise our discretionary authority under 37 C.F.R. § 41.50(b), and we newly reject claim 12 under 35 U.S.C. § 112(b) (or pre-AIA § 112, ¶ 2) as being indefinite. We likewise reject claims 14–20, which depend from independent claim 12, on the same basis.

CLAIM 21

Claim 21 is reproduced below with added emphasis:

> 21. A non-transitory machine-readable medium comprising instructions that, when incorporated as one or more modules into a matching system, cause the matching system to perform operations comprising:

receiving deal data that pertains to a plurality of deals including a sale deal published in a circular and a coupon deal from one or more crawlers;

generating a first plurality of key-value pairs pertaining to the sale deal based on the deal data, each key-value pair of the first plurality of key-value pairs pertaining to the sale deal including an attribute that describes a characteristic of the sale deal and a value of the attribute that describes the characteristic of the sale deal;

generating a second plurality of key-value pairs pertaining to the coupon deal based on the deal data, each key-value pair of the second plurality of key-value pairs pertaining to the coupon deal including an attribute that describes a characteristic of the coupon deal and a value of the attribute that describes the characteristic of the coupon deal;

identifying a sale brand identification based on the first plurality of key-value pairs pertaining to the sale deal and a coupon brand identification based on the second plurality of key-value pairs pertaining to the coupon deal; and

generating a matchup of the sale deal and the coupon deal, including a sale deal description and a coupon deal description, based on

matching the sale brand identification and the coupon brand identification,

detecting an indication of a sale deal type based on the first plurality of key-value pairs and an indication of a coupon deal type based on the second plurality of key-value pairs, and

determining that a sale deal validity period and a coupon validity deal period overlap and have not expired, the sale deal validity period being calculated based on the first plurality of key-value pairs, and the coupon deal validity period being calculated based on the second plurality of key-value pairs, one or more modules incorporated into the matching system to specifically[] configure the matching system to perform the receiving,

> generating, identifying, matching, detecting, and determining, the one or more module implemented by one or more hardware processors of the matching system.

App. Br. 46–47.

The "identifying" limitation of claim 21 sets forth a circular process of identifying brand identification data based upon respective pluralities of key-value pairs that, in turn, are comprised of the brand identification data after it has been identified.

For this reason and the reasons already explained in relation to the other independent claims, we exercise our discretionary authority under 37 C.F.R. § 41.50(b), and we newly reject claim 21 under 35 U.S.C. § 112(b) (or pre-AIA § 112, ¶ 2) as being indefinite.

CONCLUSIONS

We sustain the rejection of claim 11 as being directed to patent-ineligible subject matter.

We do not sustain the rejection of claim 11 under 35 U.S.C. § 102(a)(1) as being anticipated by Moss.

Pursuant to our discretionary authority under 37 C.F.R. § 41.50(b), we reject claim 11 under 35 U.S.C. § 112(a) (pre-AIA 35 U.S.C. § 112, ¶ 1) as lacking adequate written description support.

Pursuant to our discretionary authority under 37 C.F.R. § 41.50(b), we reject claims 1, 3–10, 12, and 14–23 under 35 U.S.C. § 112(b) (pre-AIA 35 U.S.C. § 112, ¶ 2) as being indefinite.

Because independent claims 1, 10, 12, and 21 are so indefinite that "considerable speculation as to [the] meaning of the terms employed and assumptions as to the scope of such claims" is needed, we do not address the

merits of the Examiner's rejection under 35 U.S.C. §§ 101, 102(b), 103. *See In re Steele*, 305 F.2d 859, 862 (CCPA 1962) (holding that the Examiner and the Board were wrong in relying on what, at best, were speculative assumptions as to the meaning of the claims and in basing a prior-art rejection thereon). We therefore reverse these rejections *pro forma*.

DECISION

The Examiner's decision rejecting claim 11 is affirmed.

The Examiner's decision rejecting claims 1, 3–10, 12, and 14–23 is reversed.

Pursuant to our discretionary authority under 37 C.F.R. § 41.50(b), we reject claim 11 under 35 U.S.C. §§ 112(a) (pre-AIA 35 U.S.C. § 112, ¶ 1), and we reject claims 1, 3–10, 12, and 14–23 under 35 U.S.C. § 112(b) (pre-AIA 35 U.S.C. § 112, ¶ 2).

Rule 41.50(b) provides that "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review." Rule 41.50(b) also provides the following:

> When the Board enters such a non-final decision, the appellant, within two months from the date of the decision, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:
>
> > (1) *Reopen prosecution.* Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the prosecution will be remanded to the examiner. The new ground of rejection is binding upon the examiner unless an

> amendment or new Evidence not previously of Record is made which, in the opinion of the examiner, overcomes the new ground of rejection designated in the decision. Should the examiner reject the claims, appellant may again appeal to the Board pursuant to this subpart.
>
> (2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same Record. The request for rehearing must address any new ground of rejection and state with particularity the points believed to have been misapprehended or overlooked in entering the new ground of rejection and also state all other grounds upon which rehearing is sought.

Further guidance on responding to a new ground of rejection can be found in the Manual of Patent Examining Procedure (MPEP) § 1214.01 (9th Ed., Rev. 9, Nov. 2015).

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-IN-PART
37 C.F.R. § 41.50(b)