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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte VICTOR NOVIKOV, ADITYA AGARWAL, KENT SCHOEN,
and JARED MORGENSTERN

Appeal 2017-001612¹
Application 12/645,484
Technology Center 3600

Before LARRY J. HUME, JENNIFER L. McKEOWN, and
JOHN D. HAMANN, Administrative Patent Judges.

McKEOWN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision to reject claims 1–15 and 18–38, which constitute all the claims pending in this application. Claims 16–17 have been cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ The Appellants identify Facebook Inc. as the real party in interest. App. Br. 1.

STATEMENT OF THE CASE

Appellants' disclosed and claimed invention "generally pertains to social networking, and more specifically to combining social networking system content and advertisements in a social networking environment." Spec. ¶1.

Claim 1 is illustrative of the claimed invention and reads as follows:

1. A computer-implemented method comprising:

receiving a request to provide a display to a user of a social networking system, the display including a plurality of available spaces on a portion of the display for presenting to the user a plurality of types of content;

receiving instructions for optimizing one or more optimization goals of the social networking system;

receiving, for each type of content, a score indicating effectiveness of the content type for promoting each of one or more of the plurality of optimization goals of the social networking system;

allocating, by a computer, each of the available spaces of the portion of the display to two or more different content types based on the scores for the optimization goals of the allocated types of content and the received instructions for optimizing, the two or more different content types including at least a sponsored content type for an advertisement and a non-sponsored content type recommending the user take an action on the social networking system;

selecting a content item for each space, wherein the selected content item for each space matches the allocated type of content for the space; and

sending the display for presentation to the user.

THE REJECTIONS

The Examiner rejected claims 1–15 and 18–38 under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. Final Act. 10–13.

The Examiner rejected claims 1–15 and 18–38 under 35 U.S.C. § 103(a) as unpatentable over Ransom et al. (US 2009/0222348 A1; Sept. 3, 2009) (“Ransom”) and Jha et al. (US 2007/0260520 A1; Nov. 8, 2007) (“Jha”). Final Act. 14–27.

ANALYSIS

THE REJECTION UNDER 35 U.S.C. 101

Claims 1–15 and 18–38

Based on the record before us, we are not persuaded that the Examiner erred in rejecting claims 1–15 and 18–38 as directed to patent-ineligible subject matter.

Under 35 U.S.C. § 101, a patent may be obtained for “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” The Supreme Court has “long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 77–80 (2012), “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355. Assuming that a claim nominally falls within one of the statutory categories of machine, manufacture, process, or composition of matter, the first step in the analysis is to “determine whether the claims at issue are directed to one of those patent-ineligible concepts” (*id.*), e.g., to an abstract

idea. For example, abstract ideas include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Id.* at 2355–57. If the claims are not directed to an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered “individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 78–79). This second step is described as “a search for an “‘inventive concept’”—i.e., an element or combination of elements that is ‘. . . significantly more than . . . the [ineligible concept] itself.’” *Id.* at 2355 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

The Court acknowledged in *Mayo*, that “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S. at 71. 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).

Under step 1 of the *Alice* analysis, we consider whether the claims are directed to an abstract idea. Particularly, we consider whether the “focus of the claims is on the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish*, 822 F.3d at 1335–36. “The abstract idea exception prevents patenting a result where ‘it matters not by what process or machinery the result is accomplished.’” *McRO, Inc. v.*

Bandai Namco Games America Inc., 837 F.3d 1299, 1312 (Fed. Cir. 2016) (quoting *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 113 (1853)). “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.” *McRO*, 837 F.3d at 1314.

The Examiner determines that “[t]he claims, as a whole, are directed towards the concept of selecting sponsored and non-sponsored content to present to users of social networking system to meet one or more optimization goals.” Final Act. 10; *see also* Ans. 3–4. The Examiner further explains that the claims are similar to *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 Fed. Appx. 950 (Fed Cir. 2014) and *Electric Power Group, LLC., v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016). Specifically,

The [claim] limitations contain a similar framework [to SmartGene] of receiving and analyzing request information, comparing scores with stored optimization goals and using rules (allocation criteria) to select the advertisement and the content items. . . The instant claims describe the collection of content request information, optimization goal information, score information, the analysis of that information, and the selecting and thus display of an advertisement/non-sponsored content based on the analysis. The concept described by the claims is not meaningfully different from the concept identified in *Electric Power Group*. As such the claims are directed to an abstract idea. Ans. 5; *see also* Ans. 6 (discussing that the claims are directed to “a series of method of organizing human activities which can be done mentally or by paper & pen”). With respect to dependent claims, the Examiner points out the claims are similarly directed to the abstract idea and “are merely reciting further embellishments of the abstract idea. . .”. Ans. 6–7.

Appellants, on the other hand, assert that “the claims are actually directed to improving a computer's ability to optimize content presented to users, and thereby improve the functioning of the computer.” App. Br. 5. According to Appellants,

The claims here cannot be practiced by humans directly; instead they recite a specific computer-implemented method of selecting social networking content and advertising for presentation to users in a way that optimizes for a particular optimization goal. This improvement goes to the heart of improvements in a social networking system - to effectively select the right types of content and the right content items for the millions of individual users accessing the social networking systems. This method is clearly not a method of “organizing human activities.”

App. Br. 7. Appellants further allege that the Examiner erred in “fail[ing] to address the eligibility of each claim, instead simply rejecting the entire claim set in one fell swoop.” App. Br. 9; *see also* Reply Br. 3.

Appellants also assert:

the claims at issue incorporate features that limit the claims to a specific process of selecting social networking content for presentation to users in a way that optimizes for optimization goals using the specified instructions and scores indicating each content type’s ability to further the goals.

Ans. 7; *see also* App. Br 10–11. Further,

[a]s in *Enfish*, the claims herein are directed to an improvement in computer functionality because their purpose and effect are to improve the computer's ability to optimize content presented to users of a social networking system. Such automatic selection of selecting content is a crucial function of a social networking system, and improvements to the same are directed to improvements in computer functionality.

App. Br. 11.

We find Appellants' arguments unpersuasive. We agree with the Examiner that the claims are directed to the abstract idea of selecting mixed (sponsored and non-sponsored) content to be displayed to users of a social networking system to meet optimization goals. Ans. 3–4. Notably absent from Appellants' argument is a sufficient explanation of how the computer function is improved or an identification of a technical improvement. As the Examiner explains,

The claimed invention is merely reciting the performance of advertisement selection process in business practice along with the requirement to perform it on the internet. They are directed to improve the targeted ad selection process rather than functioning of a computer. Thus the argument regarding an improvement to a computer technology or computer functioning is not persuasive.

Ans. 14.

We also agree with the Examiner that the claims merely collect, analyze, and display data. Final Act. 11–12; Ans. 5–6. Appellants allege that the claims are directed to an “inventive method,” but fail to identify how the recited claims are inventive. *See, e.g.*, Reply Br. 3–4. Rather, as the Examiner finds, the claims merely collect data, i.e. optimization instructions and scores for content, analyze data, i.e. allocating content based on scores and selecting content for each display space, and display data, sending the display for presentation. Reply Br. 5. As such, the claims are directed to an abstract idea. *See Electric Power Group, LLC.*, 830 F.3d 1350.

Similarly, we are not persuaded that the Examiner erred with respect to the dependent claims. Namely, Appellants merely recite claim language from the dependent claims and do not persuasively argue how these limitations are not abstract. *See, e.g.*, App. Br. 9; Reply Br. 3.

Having found Appellants' claims are directed to an abstract idea under Alice's step 1 analysis, we next address whether the claims add significantly more to the alleged abstract idea. As directed by our reviewing Court, we search for an "'inventive concept' sufficient to 'transform the nature of the claim into a patent-eligible application.'" *McRO*, 837 F.3d at 1312 (quoting *Alice*, 134 S. Ct. at 2355). The implementation of the abstract idea involved must be "more than performance of 'well-understood, routine, [and] conventional activities previously known to the industry.'" *Content Extraction*, 776 F.3d at 1347–48 (alteration in original) (quoting *Alice*, 134 S. Ct. at 2359). The "inventive concept" "must be significantly more than the abstract idea itself, and cannot simply be an instruction to implement or apply the abstract idea on a computer." *BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349 (Fed. Cir. 2016).

Under step 2 of the Alice analysis, the Examiner determines that "[t]he claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the steps require no more than a generic computer." Final Act. 12. According to the Examiner, "the generic functions (i.e. receiving optimization instructions, receiving a score indicating effectiveness, allocating spaces to display) are well-understood, routine, and conventional activities known in the targeting advertising/marketing industry." *Id.* The Examiner also identifies that the Specification describes that the computer may be a "general-purpose computing device." Ans. 7–8 (citing Spec. ¶ 129); Final act. 12; *see also* Ans. 8 (citing *Ultramercial* for the principle that "claimed functions of the generic computer represent insignificant data-gathering steps and thus add nothing of practical significance to the abstract idea").

Appellants, on the other hand, allege that the claims recite “significantly more than the proposed abstract idea.” App. Br. 11–14.

According to Appellants,

Like the claims at issue in *DDR Holdings*, the claims of this application describe a specific method for solving a business challenge that is particular to the Internet: that of optimizing a page of content displayed to users over a network. Consequently, the claims of this application “overcome a problem specifically arising in the realm of computer networks.”

App. Br. 13.

Appellants fail to persuade us of error in the Examiner’s rejection with respect to the second *Alice* step. With respect to Appellants’ arguments invoking *DDR Holdings*—in that the instant claims “describe a specific method for solving a business challenge that is particular to the Internet: that of optimizing a page of content displayed to users over a network”—we disagree. In *DDR Holdings*, the court held that a claim may amount to more than an abstract idea recited in the claims when it addresses and solves problems only encountered with computer technology and online transactions, e.g., by providing (serving) a composite web page rather than adhering to the routine, conventional functioning of Internet hyperlink protocol. *See DDR Holdings*, 773 F.3d at 1257–59. In contrast, Appellants’ claims performs a process of collecting, analyzing, and displaying data (*supra*), utilizing conventional computer networks and systems. *See Ans.* 8, 11–12.

Despite Appellants’ arguments to the contrary, the collection, analysis, and display of data, is not a solution to a technical problem as discussed in *DDR Holdings*. As the Examiner explains, the claims are “simply [a] business solution to improve targeted advertisement selection

process. The Applicant's claimed limitations explicitly recite a technological environment by simply using existing conventional computer and internet.”

Ans. 13. Moreover, as the Examiner also points out,

Applicant did not persuasively pose the claims as a technical solution to a technical problem since "selecting mixed (sponsored and non-sponsored) content to be displayed to users of a social networking system to meet optimization goals" is neither a technical problem nor a technical solution and there are No technical improvements using the claimed invention. They are simply business solution to improve targeted advertisement selection process.

Ans. 12–13. As such, we are not persuaded of error in the Examiner’s rejection.

Accordingly, for the reasons discussed above and by the Examiner, we affirm the Examiner’s § 101 rejection of claims 1–15 and 18–38 as directed to patent-ineligible subject matter.

THE OBVIOUSNESS REJECTION BASED ON RANSOM AND JHA

Claims 1–15 and 18–38

Based on the record before us, we are persuaded that the Examiner erred in rejecting claims 1–15 and 18–38 as unpatentable over Ransom and Jha.

Appellants contend that the

Examiner fails to identify any portion of either reference that teaches “allocating . . . based on the scores for the optimization goals of the allocated types of content and the received instructions for optimizing.” Even if the references allocated content types on some basis, the examiner has provided no basis for a factual finding of an allocation based on scores of the optimization goals of the allotted types.

Reply Br. 13. *See also* App. Br. 17. Similarly, Appellants assert:

The Examiner identifies that Jha “teaches displaying two or more different type of content with ratings within one or more spaces on a display” and different items in a display (items 600, 601, and 602 in Fig. 6 of Jha), but does not identify any optimization goal used in the allocation of content types or corresponding score of the content types. The Examiner has not demonstrated that Jha teaches “allocating . . . based on the scores of the optimization goals . . . and the received instructions for optimizing.”

App. Br. 21.

We are persuaded by Appellants arguments that the Examiner does not sufficiently explain how Ransom and Jha are combined to teach the recited “allocating,” as required by claim 1. Notably, claim 1 requires allocation of content *based on* the scores for optimization goals and received optimizing instructions. The Examiner *solely* cites Figure 6 of Jha to combine with Ransom. This figure merely depicts a plurality of content. Jha, Fig. 6. While the exemplary display of Figure 6 includes product reviews, Figure 6 does not teach or suggest any allocation of display space *based on* the product reviews or other scores for the types of content. Further, with respect to Ransom, the Examiner appears to rely on a desire to increase awareness of a promotion and organization as the received optimization goals (Final Act. 15) and use of the content, e.g. largest number of people who interaction with the content, as the effectiveness score. Final Act. 16. The Examiner, though, fails to sufficiently explain how this score, which is based on user interaction with the content, could be used for allocation of content types to display to the user. As such, based on the record before us, we are persuaded of error in the Examiner’s rejection.

Accordingly, we reverse the Examiner's § 103 rejection of claim 1, as well as claim 23, which recites similar limitations, and dependent claims 2–15, 18–22, and 24–38 as unpatentable over Ransom and Jha.

DECISION

We affirm the Examiner's decision to reject claims 1–15 and 18–38 as directed to patent-ineligible subject matter and reverse the Examiner's rejection of claims 1–15 and 18–38 as unpatentable over Ransom and Jha.

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, we affirm the Examiner's decision. *See* 37 C.F.R. § 41.50(a)(1).

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED