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Client 170101 c/o
THOMAS HORSTEMEYER, LLP
3200 WINDY HILL RD SE
SUITE 1600E
ATLANTA, GA 30339

EXAMINER
PHAM, TUAN A

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uspatents@tkhr.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PENG SHAO, LE HUANG, and MADHU M. KURUP

Appeal 2019-001048
Application 15/477,345
Technology Center 2100

Before JOHN A. JEFFERY, KRISTEN L. DROESCH, and
BETH Z. SHAW, *Administrative Patent Judges.*

SHAW, *Administrative Patent Judge.*

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the
Examiner's decision to reject claims 1–20. Final Act. 1. We have
jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] We use the word "Appellant" to refer to "Applicant" as defined in
37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as
Amazon Technologies, Inc. Appeal Br. 2.

CLAIMED SUBJECT MATTER

The claims are directed to extracting topics from customer review search queries. Claims 1 and 9, reproduced below, are illustrative of the claimed subject matter:

1. A system, comprising:

at least one computing device in data communication with a plurality of client devices via a network;

a data store comprising a plurality of search queries related to a collection of user reviews of a plurality of items, individual search queries of the plurality of search queries being received over the network from individual client devices of the plurality of client devices via a respective first user interface rendered via the individual client devices; and

at least one application executable in the at least one computing device, wherein, when executed, the at least one application causes the at least one computing device to at least:

identify a plurality of relevant topics from the plurality of search queries associated with a specific item of the plurality of items;

generate a user interface comprising at least one of the plurality of relevant topics; and

transmit the user interface to at least one of the plurality of client devices over the network.

9. A method, comprising:

storing, via at least one computing device, a plurality of search queries of a collection of user reviews in a data store, the plurality of search queries being collected over a network from a plurality of client devices;

identifying, via the at least one computing device, at least one relevant topic for a specific item based at least in part on the plurality of search queries; and

generating, via the at least one computing device, a user interface based at least in part on the at least one relevant topic.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Galitsky	US 2009/0282019 A1	Nov. 12, 2009
Xie	US 2010/0179948 A1	July 15, 2010

REJECTIONS

Claims 1–20 are rejected under 35 U.S.C. § 101. Final Act. 3.

Claim 20 is rejected under 35 U.S.C. § 112 ¶ 2 as being indefinite. Ans. 13.

Claims 1–20 are rejected under 35 U.S.C. § 103(a) a being unpatentable over Galitsky and Xie. Final Act. 9.[2]

OPINION

Section 101 Rejection

Appellant argues the pending claims as a group. As permitted by 37 C.F.R. § 41.37, we decide this issue based on claim 9. *See* 37 C.F.R. § 41.37(c)(1)(iv)(2016).

Section 101 of the Patent Act provides that "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" is patent eligible. 35 U.S.C. § 101. However, the Supreme Court has long recognized an implicit exception to this section: "Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (quoting *Ass'n for*

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[2] The Examiner also provisionally rejects claims 1–20 under obviousness-type double patenting as being unpatentable over claims 1–26 of U.S. Patent No. 8,658,824. Final Act. 4. Appellant does not traverse this provisional rejection in the Appeal Brief, and therefore, we need not address this rejection.

Molecular Pathology v. Myriad Genetics, Inc., 569 U.S. 576, 589 (2013)). To determine whether a claim falls within one of these excluded categories, the Court has set out a two-part framework. The framework requires us first to consider whether the claim is "directed to one of those patent-ineligible concepts." *Alice*, 573 U.S. at 217. If so, we then examine "the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 78, 79 (2012)). That is, we examine the claims for an "inventive concept," "an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Alice*, 573 U.S. at 217–18 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

The Patent Office has issued guidance about this framework. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("2019 Eligibility Guidance"). Under the guidance, to decide whether a claim is "directed to" an abstract idea, we evaluate whether the claim (1) recites an abstract idea grouping listed in the guidance *and* (2) fails to integrate the recited abstract idea into a practical application. *See* 2019 Eligibility Guidance, 84 Fed. Reg. at 51. If the claim is "directed to" an abstract idea, as noted above, we then determine whether the claim recites an inventive concept. The 2019 Eligibility Guidance explains that when making this determination, we should consider whether the additional claim elements add "a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field" or "simply

append[] well-understood, routine, conventional activities previously known to the industry." 2019 Eligibility Guidance, 84 Fed. Reg. at 56.

With these principals in mind, we turn to the Examiner's § 101 rejection.

Abstract Idea

Turning to Step 2A, Prong 1, the claimed method includes the following limitations: storing "*a plurality of search queries of a collection of user reviews in a data store*," and identifying "*at least one relevant topic for a specific item based at least in part on the plurality of search queries*."

Claim 9 recites an abstract idea grouping listed in the 2019 Eligibility Guidance: "mental processes." *See* 2019 Eligibility Guidance, 84 Fed. Reg. at 52, 53 (listing "[m]ental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion)" as one of the "enumerated groupings of abstract ideas" (footnote omitted)). The guidance explains that "mental processes" include acts that people can perform in their minds or using pen and paper, even if the claim recites that a generic computer component performs the acts. *See* 2019 Eligibility Guidance, 84 Fed. Reg. at 52 n.14 ("If a claim, under its broadest reasonable interpretation, covers performance in the mind but for the recitation of generic computer components, then it is still in the mental processes category unless the claim cannot practically be performed in the mind."); *see also Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016) ("[W]ith the exception of generic computer-implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper."), *quoted in* 2019 Eligibility Guidance, 84 Fed. Reg. at 52 n.14; *Mortg. Grader, Inc. v.*

First Choice Loan Servs. Inc., 811 F.3d 1314, 1324 (Fed. Cir. 2016) (holding that computer-implemented method for "'anonymous loan shopping'" was an abstract idea because it could be "performed by humans without a computer"); *quoted in* 2019 Eligibility Guidance, 84 Fed. Reg. at 52 n.14.

The method recited in claim 9 executes steps that people can perform in their minds or using pen and paper. A person can perform each of the italicized steps of claim 9 by using his or her mind, or pen and paper, in the claimed manner. For example, a person can mentally (or by pen and paper) store a plurality of search queries of a collection of user reviews, and can identify "at least one relevant topic for a specific item based at least in part on the plurality of search queries," using his or her mind or pen and paper.

Turning to Step 2A, Prong 2, the remaining elements recited in claim 9 do not integrate the abstract idea into a practical application. In addition to the steps discussed above, claim 9 recites a "at least one computing device" and a "user interface." The recited computing device and user interface are generic components. *See, e.g.*, Spec. Fig. 1, ¶ 11 ("computing environment 103 may include a plurality of computing devices may be employed that are arranged, for example, in one or more server banks or computer banks or other arrangements. For example, a plurality of computing devices together may comprise a cloud computing resource, a grid computing resource, and/or any other distributed computing arrangement"). *See* 2019 Eligibility Guidance, 84 Fed. Reg. at 55 (identifying "merely includ[ing] instructions to implement an abstract idea on a computer" as an example of when an abstract idea has not been integrated into a practical application).

We are not persuaded that the claimed invention improves the computer or its components' functionality or efficiency, or otherwise changes the way those devices function, at least in the sense contemplated by the Federal Circuit in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), despite Appellant's arguments to the contrary (Appeal Br. 13–17). The claimed self-referential table in *Enfish* was a specific type of data structure designed to improve the way a computer stores and retrieves data in memory. *Enfish*, 822 F.3d at 1339. To the extent Appellant contends that the claimed invention uses such a data structure to improve a computer's functionality or efficiency, or otherwise change the way that device functions, there is no persuasive evidence on this record to substantiate such a contention.

Appellant's reliance on *BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) (Appeal Br. 17–18) is also unavailing. There, the court held eligible claims directed to a technology-based solution to filter Internet content that overcame existing problems with other Internet filtering systems by making a known filtering solution— namely a "one-size-fits-all" filter at an Internet Service Provider (ISP)— more dynamic and efficient via individualized filtering at the ISP. *BASCOM*, 827 F.3d at 1351. Notably, this customizable filtering solution improved the computer system's performance and, therefore, was patent-eligible. *See id.* But unlike the filtering system improvements in *BASCOM* that added significantly more to the abstract idea in that case, the claimed invention here uses generic computing components to implement an abstract idea.

Nor is this invention analogous to that which the court held eligible in *McRO, Inc. v. Bandai Namco Games Am., Inc.*, 837 F.3d 1299 (Fed. Cir. 2016) despite Appellant's arguments to the contrary (Appeal Br. 15–16). There, the claimed process used a combined order of specific rules that rendered information in a specific format that was applied to create a sequence of synchronized, animated characters. *McRO*, 837 F.3d at 1315. Notably, the recited process *automatically animated characters* using particular information and techniques—an improvement over manual three-dimensional animation techniques—was not directed to an abstract idea. *Id.* at 1316.

But unlike the claimed invention in *McRO* that improved how the physical display operated to produce better quality images, the claimed invention here merely uses generic computing components to generate a user interface. This generic computer implementation is not only directed to a mental process, but also does not improve a display mechanism as was the case in *McRO*. *See SAP Am. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (distinguishing *McRO*).

Appellant's reliance on *Finjan, Inc. v. Blue Coat Systems, Inc.*, 879 F.3d 1299 (2018) (Appeal Br. 8, 9) is likewise unavailing. There, the court held eligible claims directed to a behavior-based virus scanning system. In reaching this conclusion, the court noted that the claimed invention employed a new kind of file that enabled a computer security system to do that which could not be done previously, including accumulating and using newly-available, behavior-based information about potential threats. *Finjan*, 879 F.3d at 1305.

That is not the case here. To the extent that Appellant contends that the claimed invention is directed to such improvements in computer capabilities (*see* Appeal Br. 8, 9), there is no persuasive evidence on this record to substantiate such a contention.

We reach the same conclusion regarding Appellant's reliance on *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356 (2018) (Appeal Br. 6, 7). There, the court held eligible claims reciting a computing device that could display an application summary window that was not only reachable directly from the main menu, but could also display a limited list of selectable functions while the application was in an un-launched state. *Core Wireless*, 880 F.3d at 1360–63. Upon selecting a function, the device would then launch the application and initiate the selected function. *Id.* at 1360. In reaching its eligibility conclusion, the court noted that the claimed invention was directed to an improved user interface for computing devices that used a particular manner of summarizing and presenting a limited set of information to the user, unlike conventional user interface methods that displayed a generic index on a computer. *Id.* at 1362–63.

That is not the case here. To the extent that Appellant contends that the claimed invention is directed to such improvements in computer capabilities (*see* Appeal Br. 6, 7), there is no persuasive evidence on this record to substantiate such a contention.

Thus, the claims do not integrate the judicial exception into a practical application. The claims do not (1) improve the functioning of a computer or other technology, (2) are not applied with any particular machine (except for a generic computer), (3) do not effect a transformation of a particular article to a different state, and (4) are not applied in any meaningful way beyond

generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See* MPEP §§ 2106.05(a)–(c), (e)–(h). We, therefore, agree with the Examiner that claim 9 is directed to an abstract idea.

Inventive Concept

Because we determine claim 9 is "directed to" an abstract idea, we consider whether claim 9 recites an "inventive concept." The Examiner determined claim 9 does not recite an inventive concept because the additional elements in the claim do not amount to "significantly more" than an abstract idea. *See* Final Act. 3.

We agree with the Examiner's determination. As noted above, the claimed invention merely uses generic computing components to implement the recited abstract idea. The additional elements recited in the claim include the "at least one computing device" and "user interface." The claim recites these elements at a high level of generality, and the written description indicates that these elements are generic computer components. *See, e.g.*, Spec. Fig. 1, ¶¶ 11, 42. Using generic computer components to perform abstract ideas does not provide the necessary inventive concept. *See Alice*, 573 U.S. at 223 ("[T]he mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention."). Thus, these elements, taken individually or together in combination, do not amount to "significantly more" than the abstract ideas themselves.

Appellant contends various elements recited in the claim provide the necessary inventive concept. Appeal Br. 17. But these elements form part

of the recited abstract ideas and thus are not "additional elements" that
"'transform the nature of the claim' into a patent-eligible application."
Alice, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78); *see also* 2019
Eligibility Guidance, 84 Fed. Reg. at 55 n.24 ("USPTO guidance uses the
term 'additional elements' to refer to claim features, limitations, and/or steps
that are recited in the claim *beyond the identified judicial exception*."
(Emphasis added)).

Rather, the recited "computing device" and "user interface" are the
additional recited elements whose generic computing functionality is well-
understood, routine, and conventional. *See Intellectual Ventures I LLC v.
Capital One Bank (USA)*, 792 F.3d 1363, 1368 (Fed. Cir. 2015) (noting that
a recited user profile (i.e., a profile keyed to a user identity), database, and
communication medium are generic computer elements); *Mortg. Grader*,
811 F.3d at 1324–25 (noting that components such an "interface,"
"network," and "database" are generic computer components that do not
satisfy the inventive concept requirement). *Accord* Final Act. 2 (concluding
that the claims' additional generic computer components do not add
significantly more than the abstract idea.). Appellant's arguments do not
persuade us claim 9 is "directed to" a patent-eligible inventive concept.

To the extent Appellant contends that the claimed invention is rooted
in technology because it is ostensibly directed to a technical solution (*see*
Appeal Br. 17), we disagree. Even assuming, without deciding, that the
claimed invention can facilitate generating a user interface faster than doing
so manually, any speed increase comes from the capabilities of the generic
computer components—not the recited process itself. *See FairWarning IP,
LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) (citing

Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.), 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.")); *see also Intellectual Ventures I LLC v. Erie Indemnity Co.*, 711 F. App'x 1012, 1017 (Fed. Cir. 2017) (unpublished) ("Though the claims purport to accelerate the process of finding errant files and to reduce error, we have held that speed and accuracy increases stemming from the ordinary capabilities of a general-purpose computer 'do[ ] not materially alter the patent eligibility of the claimed subject matter.'"). Like the claims in *FairWarning*, the focus of claim 9 is not on an improvement in computer processors as tools, but on certain independently abstract ideas that use generic computing components as tools. *See FairWarning*, 839 F.3d at 1095 (citations and quotation marks omitted).

Accordingly, we sustain the rejection of claims 1–20 under 35 U.S.C. § 101.

Section 112 ¶ 2 Rejection

The Examiner rejects dependent claim 20 under 35 U.S.C. § 112 ¶ 2 as being "unclear because it recites an open list of alternatives." Ans. 13, 14. Yet, we agree with Appellant that claim 20 does not recite an open list of alternatives. Reply Br. 3. "Rather, claim 20 recites that the listing comprises **at least one of** 'a number of user reviews associated with the respective relevant topic, a rating summary for the respective relevant topic, a description of the respective relevant topic, **or** a component for viewing the collection of user reviews associated with the respective relevant topic.'" *Id.*

3–4. Accordingly, we do not sustain the rejection of claim 20 under 35 U.S.C. § 112 ¶ 2.

Section 103 Rejection

Appellant generally argues that Galitsky and Xie fail to teach or suggest "a data store comprising a plurality of search queries related to a collection of user reviews of a plurality of items, . . . 'individual search queries of the plurality of search queries being received over the network from individual client devices of the plurality of client devices via a respective first user interface rendered via the individual client devices,' as recited in claim 1." Appeal Br. 21–22 (emphases omitted); Reply Br. 8–9. In particular, Appellant argues Galitsky merely discusses building queries (Appeal Br. 21, 22) and using a query about a specific feature about a product. Reply Br. 9. We are not persuaded by this argument because as the Examiner finds, and we agree, Galitsky teaches collecting "sentiments" (i.e., reviews or opinions) from users of products, i.e., items, about the products, and then storing them for subsequent retrieval or searches. Ans. 19 (citing Galitsky ¶¶ 5, 7, 84, 87, 35, 40).

Appellant also argues the references do not teach "identify[ing] a plurality of relevant topics from the plurality of search queries *associated with a specific item* of the plurality of items." Appeal Br. 22 (emphases added); Reply Br. 11–12. In particular, Appellant argues "Galitsky merely discusses receiving a single search query and providing recommendations based on a lexicography." Appeal Br. 23.

We are not persuaded by this argument because as the Examiner finds, and we agree, Galitsky teaches identifying relevant information and ranking

relevant topics or information associated with a specific product, i.e., an item. Ans. 22 (citing Galitsky ¶¶ 40–44 ("In addition, the method is capable of local extraction of phrases and sentences about an individual feature of the product and identifying that phrase or sentence as belonging to the individual feature . . . identify the topic and sentiment of individual sentences and phrases in a document")). Accordingly, we sustain the rejection of claim 1 under 35 U.S.C. § 103.

Dependent Claim 2

Regarding dependent claim 2, Appellant argues Galitsky and Xie fail to teach "receiv[ing] the plurality of search queries from the plurality of client devices requesting a search of the collection of user reviews using the plurality of search queries," as recited in claim 2. Appeal Br. 25, 26; Reply Br. 12–13. We are not persuaded by this argument because Galitsky teaches receiving many search queries from a plurality of users and using the queries information about the products and sentiments about the products are extracted and stored. Final Act. 12 (citing Galitsky ¶¶ 40–41).

Appellant also argues Galitsky fails to teach storing "the plurality of search queries in the data store," as recited in claim 2. Appeal Br. 26, 27. We are not persuaded by this argument because Galitsky teaches that queries are assembled to extract information from obtained information, and that using the queries, information is extracted "and stored." Final Act. 12 (citing Galitsky ¶¶ 40-41). Thus, Galitsky teaches storing information, including storing extracted phrases and sentences. "In addition, the method is capable of local extraction of phrases and sentences about an individual feature of the product and identifying that phrase or sentence as belonging to the individual feature. That is also stored for later presentation to a user

searching for that individual feature of a product." Galitsky ¶ 40.
Moreover, Galitsky teaches "[t]he system also is able to present to a user, in response to a query about a specific feature about a product, a quote from another consumer's review that is responsive to the user's query." *Id.* at ¶ 7. Accordingly, we sustain the rejection of claim 2 under 35 U.S.C. § 103.

Dependent Claim 4

Regarding claim 4, Appellant argues Galitsky and Xie fail to teach "wherein the plurality of relevant topics are identified based at least in part on a frequency of occurrence in the plurality of search queries." Appeal Br. 28–29; Reply Br. 14–16. Yet, as the Examiner finds and we agree, Galitsky teaches identifying and extracting relevant topics (Galitsky ¶¶ 40–44), and Xie teaches taking into consideration historical query results of past queries of a plurality of users, such as click frequencies or selection frequencies. Ans. 23–24 (citing Xie ¶¶ 60, 74). Accordingly, we are unpersuaded by Appellant's argument. For these reasons, we sustain the rejection of claim 4 under 35 U.S.C. § 103(a).

Claims 9-15

With respect to independent claim 9 and dependent claims 10–15, Appellant repeats similar arguments as made with respect to independent claim 1. Appeal Br. 29–35. We are not persuaded by these arguments for the reasons discussed above with respect to claim 1. Accordingly, we sustain the rejection of claims 9–15 under 35 U.S.C. § 103.

Claim 16

With respect to independent claim 16 and dependent claims 17–20, Appellant repeats similar arguments as made with respect to independent claim 1. Appeal Br. 35–35. We are not persuaded by these arguments for

the reasons discussed above with respect to claim 1. Accordingly, we sustain the rejection of claims 16–20 under 35 U.S.C. § 103.

CONCLUSION

We affirm rejection of claims 1–20 under 35 U.S.C. § 101.

We reverse the rejection of claim 20 under 35 U.S.C. § 112.

We affirm rejection of claims 1–20 under 35 U.S.C. § 103.

SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–20	101	Eligibility	1–20	
20	112 ¶ 2	Indefiniteness		20
1–20	103(a)	Galitsky, Xie	1–20	
Overall Outcome			1–20	

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