



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/332,490	10/24/2016	Anni R. Coden	YOR920161266US1 (34004)	3763
48233	7590	03/24/2020	EXAMINER	
SCULLY, SCOTT, MURPHY & PRESSER, P.C. 400 GARDEN CITY PLAZA SUITE 300 GARDEN CITY, NY 11530			ORTIZ ROMAN, DENISSE Y	
			ART UNIT	PAPER NUMBER
			3687	
			NOTIFICATION DATE	DELIVERY MODE
			03/24/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

IBMPAIRENotify@ssmp.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ANNI R. CODEN, HANI T. JAMJOOM, DAVID M. LUBENSKY, JUSTIN G. MANWEILER, KATHERINE VOGT, and JUSTIN D. WEISZ

Appeal 2019-001333
Application 15/332,490
Technology Center 3600

Before JOHNNY A. KUMAR, LINZY T. McCARTNEY, and MICHAEL T. CYGAN, *Administrative Patent Judges*.

CYGAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's decision to reject claims 1, 2, 4–10, 12–17, and 19–23. Appeal Br. 2. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as International Business Machines Corporation. Appeal Br. 2.

CLAIMED SUBJECT MATTER

The claimed invention generally relates to modifying a personalized recipe based on restaurant profiles and contracting out the preparation of the recipe to a selected restaurant. Appeal Br. 3–9. Independent claim 1 is illustrative:

1. A computer implemented method for automatically modifying a personalized recipe based on restaurant profiles stored in a database comprising the steps of:
 - storing in a first database a user personal profile, the user personal profile comprising one or more of user dietary requirements, user culinary preferences, user medical conditions and user location information;
 - storing in a second database per-restaurant profiles for a plurality of restaurants, each per-restaurant profile comprising one or more of types of cuisines, recipe ingredients, location information and reputation wherein a cognitive computer has access to the first database and the second database;
 - generating by the cognitive computer a first personalized recipe based on user culinary selections and the user profile in the first database, the first personalized recipe comprising a first list of ingredients;
 - determining by the cognitive computer whether there are one or more first type candidate restaurants that are able to prepare the first personalized recipe based on the per-restaurant profiles in the second database, the first type candidate restaurant being determined to be able to prepare the first personalized recipe based on the first list of ingredients;
 - determining by the cognitive computer that no first type candidate restaurants are able to prepare the personalized recipe;
 - automatically modifying the personalized recipe, based on the determination by the cognitive computer that there is no first type candidate restaurant able to prepare the personalized recipe, to create a first modified personalized recipe having at

least one ingredient different from the ingredients in the first list of ingredients, the cognitive computer providing the first modified personalized recipe that meets the user profile and have similar taste to the first personalized recipe, prior to the step of receiving a selection;

providing by the cognitive computer a historical price range of recipes that have been accepted by the user for the first modified personalized recipe and for at least one second modified personalized recipe, the at least one second modified personalized recipe having at least one ingredient different from the ingredients in the first list of ingredients;

determining by the cognitive computer a similarity between the first modified personalized recipe and the at least one second modified personalized recipe;

automatically selecting by the cognitive computer one or more of the first modified personalized recipe and the at least one second modified personalized recipe that are within a range of similarity to the personalized recipe;

determining by the cognitive computer whether there are one or more second type candidate restaurants that are able to prepare the selected one or more of the first modified personalized recipe and the at least one second modified personalized recipe based on the per-restaurant profiles in the second database;

automatically selecting one of the second type candidate restaurants based on the similarity; and

contracting out the preparation of the personalized recipe to the selected restaurant.

Appeal Br. 26–27 (Claims App.).

Independent claims 9 and 16 recite a system and a storage medium, respectively, which are similar in scope with claim 1. *Id.* at 29–33.

Dependent claims 2, 4–8, 10, 12–15, 17, and 19–23 each incorporate the limitations of their respective independent claims. *Id.* at 27–34. Claims 3, 11, and 18 have been cancelled during prosecution. *Id.* at 27, 30, 33.

REJECTION

Claims 1, 2, 4–10, 12–17, and 19–23 are rejected under 35 U.S.C. § 101 as being ineligible subject matter.

OPINION

Patent-eligible subject matter is defined in 35 U.S.C. § 101 of the Patent Act, which recites:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

There is, however, an implicit, longstanding exception to patent-eligible subject matter in 35 U.S.C. § 101: “[l]aws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (citation omitted). This exception precludes patenting of “the basic tools of scientific and technological work” from which all inventions spring. *Id.* at 216–17 (quotation marks and citation omitted). Invention or discovery under § 101 is distinguished as being the application of such tools to an end otherwise satisfying the requirements of the patent statutes. *See Gottschalk v. Benson*, 409 U.S. 63, 67 (1972).

The Supreme Court has established a framework for this eligibility determination. Where a claim is directed towards a law of nature, natural phenomena, or abstract idea, the elements of the claim as a whole must ensure that the claim, in practice, amounts to significantly more than a patent on the law of nature, natural phenomena, or abstract idea itself. *Alice*, 573 U.S. at 217–18. In applying this eligibility analysis, our reviewing court has stated, “the decisional mechanism courts now apply is to examine earlier

cases in which a similar or parallel descriptive nature can be seen[,] . . . the classic common law methodology for creating law when a single governing definitional context is not available.” *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) (citation omitted).

To address the growing body of precedent, the USPTO recently published revised examination guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50, 50 (Jan. 7, 2019) (hereinafter 2019 Guidance). The 2019 Guidance seeks to improve the clarity of the subject matter eligibility analysis and improve consistency of this analysis across the USPTO. *Id.*

Under the 2019 Guidance, we first look to whether the claim is directed to a judicial exception because:

- (1) the claim recites a law of nature, natural phenomenon, or abstract idea, the last of which includes certain groupings, identified as mathematical concepts, certain methods of organizing human activity and mental processes; and
- (2) the claim as a whole fails to recite additional elements that integrate the judicial exception into a practical application (*see* MANUAL OF PATENT EXAMINATION PROCEDURE (hereinafter “MPEP”) § 2106.05(a)–(c), (e)–(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim: adds a specific limitation beyond the judicial exception that are not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or instead,

simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See 2019 Guidance, *passim*.

A. Analysis

We have reviewed the Examiner’s subject matter eligibility rejection (Final Act. 3–11; Ans. 3–5) in light of Appellant’s contentions that the Examiner has erred (Appeal Br. 9–25; Reply Br. 2–9). We are not persuaded by Appellant’s contention of Examiner error in rejecting claims 1, 2, 4–10, 12–17, and 19–23 under 35 U.S.C. § 101. Because Appellant does not argue any claim separately, we select claim 1 as representative of the grouping, and claims 2, 4–10, 12–17, and 19–23 stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

1. “Recites an Abstract Idea”

The Examiner finds claim 1 directed to meal planning. Final Act. 3. Specifically, the Examiner finds claim 1 to recite an abstract idea in the form of the following identified abstract concepts: “storing a user personal profile,” “storing per-restaurants profiles,” “connecting and interacting with a cognitive computer,” “generating a personalized recipe,” “determining a restaurant from a first type candidate restaurants for preparing the personalized recipe,” “determining that no first type candidate restaurants are able to prepare the recipe,” “modifying the personalized recipe to create a modified personalized recipe,” “providing historical price range of recipes,” “determining similarity between the recipes,” “selecting recipes,” “determining one or more second type candidate restaurants for preparing the modified personalized recipe,” “receiving a selection of a selected

restaurant from the first type candidate restaurant or the second type candidate restaurant,” and “contracting out the preparation of the personalized recipe to the selected restaurant.” *Id.* at 4–5.

The Examiner has found these limitations to be similar to concepts previously identified by the courts as abstract, such as mental steps or a method of organizing human activity. *Id.* at 6–7. Appellant argues that the concepts described by the Examiner are over-generalized because they are not restricted to “generating a personal recipe.” Appeal Br. 9. Appellant instead argues that the claims are “directed to a computer implemented invention for automatically modifying a personalized recipe based on restaurant profiles stored in a database.

The USPTO’s 2019 Guidance states that the abstract idea exception includes mental processes “when recited as such in a claim limitation(s) (that is when recited on their own or per se).” 2019 Guidance, 84 Fed. Reg. at 52. Examples of mental processes in the 2019 Guidance include an “observation, evaluation, judgment, [and] opinion.” *Id.* In particular, Updated Guidance issued by the USPTO in October 2019 characterizes “a claim to collecting and comparing known information” as a mental process, where such can be practically performed in the human mind. October 2019 Update: Subject Matter Eligibility 7–8, accessible at https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf.

We agree with the Examiner’s determination that claim 1’s limitations involving storing user data, restaurant data, creating recipes, determining an ability to prepare the recipe, providing historical pricing data, and determining and selecting a restaurant able to prepare a modified recipe, form the type of observation, evaluation, judgment, and opinion that can be

practically performed in the human mind, or with the assistance of pen and paper. We further agree with the Examiner's determination that claim 1's limitations involving contracting with a restaurant are the type of commercial, economic interaction characteristic of those certain methods of organizing human activity that have been identified as abstract ideas. October 2019 Update at 4–6. We consider the multiple limitations together as an abstract idea for Step 2A, Prong Two, and Step 2B. October 2019 Update at 2. Consequently, we agree with the Examiner that claim 1 recites an abstract idea.

a) *“Directed to an Abstract Idea”*

Having determined that claim 1 recites an abstract idea, we next determine, under Step 2A, Prong 2 of the 2019 Guidance, whether the claims are directed to that abstract idea, or whether the claims have additional elements that integrate the abstract idea into a practical application of that abstract idea. 84 Fed. Reg. at 54.

The Examiner finds claim 1 to have elements additional to those limitations reciting an abstract idea; namely, a database and a cognitive computer. Final Act. 4. The Examiner further determines these to amount to no more than “generically recited computer elements.” *Id.* at 4, 8.

Appellant argues that the claimed invention “improves computer technology, e.g., automatically modifying a recipe, determining a restaurant capable of preparing the modified recipe, and automatically selecting one or more first and second modified personalized recipes that are within a range of similarity of a personalized recipe.” *Id.* at 12. Appellant characterizes the claimed invention as “provid[ing] a technical solution for improving computer decision making capabilities based on several inputs and

consideration of two or more restaurants capable of providing a prepared meal in a manner that was not done previously in a manual manner.” *Id.* Appellant draws an analogy to the eligible invention at issue in *McRO, Inc. v. Bandai Namco Games America, Inc.*, 837 F.3d 1299 (Fed. Cir. 2016).

An improvement to a technology or technical field may be indicative that an additional element or combination of elements integrates the exception into a practical application. 84 Fed. Reg. at 55. However, an additional element that merely includes instructions to implement an abstract idea on a computer, or merely uses a computer as a tool to perform an abstract idea, may be indicative that the judicial exception is not integrated into a practical application. *Id.*

Here, the described improvement is to improve the effectiveness of ordering prepared meals by considering two or more restaurants and the use of several inputs. Spec. ¶ 4. The additional elements of database and computer are described as modules to gather data (inputs) and to compare data with the goal of identifying a restaurant capable of preparing a desired meal. Spec ¶¶ 16–17. The modules themselves are not described in technological detail beyond the tasks they perform. Appellant has not explained how the alleged improvement to decision making capabilities necessarily results from the involvement of the claimed technological components, rather than from the tasks themselves that the Examiner has identified as the abstract idea.

With respect to Appellant’s invocation of *McRO*, the decision in *McRO* relied, in part, on a determination that the computer performed a function in a distinctly different manner from a subjective mental process, such that the computer was not merely used as a tool for automating

subjective mental activity. *McRO*, 837 F.3d at 1305–1307 (explaining in detail the prior art method and its differences from the claimed method), 1314. Appellant alleges, but does not explain, how the claimed invention functions in a distinctly different manner from a subjective mental process, so as to provide a technological improvement to the computer itself. Appeal Br. 12–13; Reply Br. 4. Accordingly, the facts before us are distinguishable from those presented in *McRO*.

Furthermore, Appellant has not argued how the additional limitations; i.e., the generically recited database and cognitive computer, act to improve any computer or specific technology or technical field. Petitioner has merely alleged a “technical advantage,” but has not shown that the particularly claimed manner of assembling data improves a particular technology or technical field. Our reviewing court provides further guidance: “[t]he mere automation of manual processes using generic computers’ . . . ‘does not constitute a patentable improvement in computer technology.’” *Trading Techs. Int’l v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019) (quoting *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017)). USPTO examination procedure also requires that “the claim must include more than mere instructions to perform the method on a generic component or machinery to qualify as an improvement to an existing technology.” MPEP § 2106.05(a). Consequently, we are not persuaded that the additional elements of claim 1 reflect an improvement in the functioning of a computer, or an improvement to another technology or technical field.

We instead agree with the Examiner’s determination that the additional elements of claim 1 are instructions to implement the particularly

claimed technique of assembling data to make decisions on recipes and restaurants on a generic computer, in effect, using a computer as a tool to determine and select an appropriate recipe and restaurant.

For these reasons, we are not persuaded that claim 1 is directed to any improvement in a computer, a technology or technological field so as to show error in the Examiner's determination that the additionally-recited elements are not more than a processing tool that aids in the above-identified judicially excepted mental process. Consequently, we are not persuaded of error in the Examiner's determination that claim 1 is directed to an abstract idea.

b) Significantly More Than an Abstract Idea

The Examiner has determined that the additional elements of database and computer do not amount to significantly more than the abstract idea when considered both individually and as a combination, since they amount to no more than a generic computer performing generic computer functions that would be routine, conventional and well-understood to one of ordinary skill in the computer art. Final Act. 8. The Examiner relies on prior court recognition that such well-understood, routine, and conventional computer functions include “performing repetitive calculations, receiving, processing, and storing data, electronically scanning or extracting data from a physical document, electronic recordkeeping, automating mental tasks, and receiving or transmitting data over a network, e.g., using the Internet to gather data.” *Id.* at 8–9.

The Examiner identifies the following claimed functions, when performed by a computer, as routine, conventional, and well-understood: “storing in a first database a user personal profile,” “storing in a second

database per-restaurants profiles,” “connecting and interacting with a cognitive computer,” “generating by the cognitive computer a personalized recipe,” “determining by the cognitive computer a restaurant from a first type candidate restaurants for preparing the personalized recipe,” “determining by the cognitive computer that no first type candidate restaurants are able to prepare the recipe,” “modifying by the cognitive computer the personalized recipe to create a modified personalized recipe,” “providing by the cognitive computer historical price range of recipes,” “determining by the cognitive computer a similarity between the recipes,” “selecting by the cognitive computer recipes,” “determining by the cognitive computer one or more second type candidate restaurants for preparing the modified personalized recipe,” “receiving by the cognitive computer selection of a selected restaurant or the second type candidate restaurant,” and “contracting by the cognitive computer out the preparation of the personalized recipe to the selected restaurant.” *Id.* at 9–11.

Appellant argues that certain steps are not routine, including “the non-routine step of determining whether a first type candidate restaurant is able to prepare the personalized recipe based on the first list of ingredients associated with those recipes,” “the non-routine step of creating a first modified personalized recipe having at least one ingredient different from the ingredients in the first list of ingredients and then determining one or more second type of restaurants based on the first personalized recipe,” and “providing a historical price range of recipes that have been accepted by the user for two modified personal recipes, determining the similarity of those two modified personal recipes to the original recipe and automatically select

one of the modified personal recipes based on the similarity to the original recipe.” Appeal Br. 17.

The steps identified by Appellant as non-routine are elements that the Examiner has identified as part of the abstract idea. Appellant has not addressed the elements additional to the abstract idea; i.e., the computer and database. Accordingly, Appellant has not shown the Examiner erred in finding, based on statements by the courts, that the additional elements of computer and database are merely routine, conventional, and well-understood for their claimed functions.

Appellant further argues that the Examiner has not based such a determination on a fact as required by the USPTO’s *Berkheimer* memorandum. Appeal Br. 22–24. However, the *Berkheimer* memorandum provides for a “citation to one or more of the court decisions discussed in MPEP § 2106.05(d)(II) as noting the well-understood, routine, conventional nature of the additional element(s).” The Examiner has cited a list of well-understood, routine, conventional elements, taken from court decisions, to support the Examiner’s determination. Final Act. 8–9 (citing examples taken from MPEP § 2106.05(d)(II)). Appellant has not explained persuasively why the Examiner’s characterization of the functions of the computer and database, based on computer functions found in prior court cases to be well-understood, routine, conventional, is in error.

Furthermore, generically claimed elements of computers and computer databases have been found to be no more than well-understood, routine, and conventional activity in the context of gathering and assembling data. *See, e.g., Berkheimer v. HP Inc.*, 890 F.3d 1369, 1370 (Fed. Cir. 2018) (“The conventional limitations of claim 1, combined with limitations of

analyzing and comparing data and reconciling differences between the data . . . amount to no more than performing the abstract idea of parsing and comparing data with conventional computer components); *Ulramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (updating an activity log by computer is well-understood, routine, conventional activity). As explained by the Supreme Court, the presence of a generic computer performing generic computer functions, such as calculation and transmission of data, is not enough to transform an abstract idea into a patent-eligible invention. *Alice Corp. v. CLS Bank*, 573 U.S. 208, 225–226 (2014). Here, the database and computer function as computational tools to store data (pertaining to user, recipes and restaurants), generate data (pertaining to recipe ingredients) based on user selections, compare data (determining if a match between recipe data and restaurant profile data exists), and to enable communication (contracting with a restaurant). Under our governing case law, this is not enough to show that the database and computer cause claim 1 to be significantly more than the identified abstract idea. Accordingly, we are not persuaded by Appellant’s argument.

In view of the foregoing, under the 2019 Guidance, informed by our governing case law concerning 35 U.S.C. § 101, Appellant has not shown the Examiner erred in concluding claim 1 is directed to a judicial exception, i.e., an abstract idea, without significantly more, and thus is patent-ineligible under § 101. We therefore sustain the Examiner’s rejection of claim 1. Since claims 2, 4–10, 12–17, and 19–23 stand or fall with claim 1, we therefore sustain the Examiner’s rejection of those claims.

CONCLUSION

For the above-described reasons, we affirm the Examiner's rejection of claims 1, 2, 4–10, 12–17, and 19–23 as lacking subject matter eligibility under 35 U.S.C. § 101.

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).

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Grounds	Affirmed	Reversed
1, 2, 4–10, 12–17, 19–23	101	Eligibility	1, 2, 4–10, 12–17, 19–23	

AFFIRMED