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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte LORRAINE M. HERGER, NEAL M. KELLER, MATTHEW A.
McCARTHY, and CLIFFORD A. PICKOVER

Appeal 2019-002411
Application 13/969,622
Technology Center 2100

Before ELENi MANTIS MERCADER, JAMES R. HUGHES, and
SCOTT E. BAIN, *Administrative Patent Judges*.

BAIN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's decision to reject claims 1–9 and 11–17, which constitute all claims pending in the application. Claim 10 has been cancelled. 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(a). Appellant identifies the real party in interest as International Business Machines Corporation. Appeal Br. 2.

BACKGROUND

The Claimed Invention

Appellant's claimed invention relates to managing resources for tasks, and more particularly to a "system for fulfilling task requirements using one or more virtual service agents (VSAs)." Spec. ¶¶ 2, 3.

Claim 1, the sole independent claim, is illustrative of the invention and the subject matter of the appeal, and reads as follows:

1. A method for *managing resources for tasks*, the method comprising:
 - storing* requirements and restrictions associated with a task in a rules database;
 - displaying* a graphical user *interface* including resource icons of resources that can, at least partially, fulfill the requirements of the task, and a *virtual service agent (VSA) icon* of a VSA associated with the task such that when a resource icon is attempted to be dragged and dropped onto the VSA icon, the VSA being an assembly of resources responsible for completing the task requirements within the specified restrictions, the graphical user interface prohibits the dragging and dropping responsive to violations of the restrictions and responsive to a result of *checking* that at least one resource includes a software agent configured to *answer natural language questions* by querying data repositories, and applying language processing, information retrieval and machine learning to determine answers to the natural language questions.

Appeal Br. 27 (Claims Appendix) (emphases added).

References

The references relied upon by the Examiner are:

Name	Reference	Date
Aiello, Jr. et al. (“Aiello”)	US 6,337,745 B1	Jan. 8, 2002
Irwin et al. (“Irwin”)	US 2009/0086959 A1	Apr. 2, 2009
Weyl et al. (“Weyl”)	US 2009/0204470 A1	Aug. 13, 2009
Omoigui	US 2010/0070448 A1	Mar. 18, 2010
Tarighat et al. (“Tarighat”)	US 2012/0259762 A1	Oct. 11, 2012

The Rejections on Appeal

Claims 1–9 and 11–17 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 7–10; Ans. 4–6.

Claims 1–7 and 17 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Irwin, Aiello, and Omoigui. Final Act. 10–16.

Claims 8 and 11–16 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Irwin, Aiello, Omoigui, and Tarighat. Final Act. 16–21.

Claim 9 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Irwin, Aiello, Omoigui, and Weyl. Final Act. 21.

DISCUSSION

We have reviewed the Examiner’s rejections in light of Appellant’s arguments presented in this appeal. Arguments which Appellant could have made but did not make in the Briefs are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). On the record before us, Appellant has not persuaded us of error. To the extent consistent with our discussion below, we adopt as our own the findings and reasons set forth in the rejection from which the appeal

is taken and in the Examiner's Answer. We provide the following for highlighting and emphasis.

Rejection Under 35 U.S.C. § 101

The Examiner determined that claim 1 is directed to “manag[ing] resources” according to “rules,” which the Examiner determined is a mental process and, therefore, constitutes an abstract idea. Final Act. 7–9; *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014) (describing two-step framework “for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts”). Further, the Examiner found that claim 1 does not recite additional limitations beyond generic computing devices, and therefore does not amount to significantly more than the abstract idea. Final Act. 9. Accordingly, the Examiner concluded that the claims constitute ineligible subject matter.

Appellant argues that claim 1 is not an abstract idea because it “improves the technological process of dragging and dropping a resource icon in a GUI.” Appeal Br. 5. Appellant further argues that the invention is “necessarily rooted in computer technology.” Reply Br. 5.

After the Briefs were filed and Answer mailed in this case, the USPTO published “Revised Subject Matter Eligibility Guidance” synthesizing case law and providing agency instruction on the application of § 101, subsequently incorporated into the MPEP. *See* USPTO, 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”). Under the Guidance, we must look to whether a claim recites:

- (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes) (“Step 2A, Prong One”); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)) (“Step 2A, Prong Two”).

See 84 Fed. Reg. at 54–55.

Only if a claim recites a judicial exception and does not integrate that exception into a practical application, do we then look to whether the claim:

- (3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or
- (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See id. at 56 (collectively “Step 2B”).

We begin our review with Step 2A, Prong One of the Guidance, as applied to Appellant’s claim 1.²

As the Examiner determined, and the preamble of claim 1 recites, claim 1 is directed to a “method for managing resources for tasks.” The method is performed by a combination of “storing” and “displaying”

² The Guidance refers to “Step One” as determining whether the claimed subject matter falls within the four statutory categories identified by 35 U.S.C. § 101: process, machine, manufacture, or composition of matter. This step is not at issue in this case.

elements in a graphical user interface. Specifically, claim 1 recites “storing requirements and restrictions [i.e., rules]” in a database, “displaying . . . resource icons,” and “displaying . . . a virtual service agent (VSA) icon” which prohibits certain drag and drop actions based on rules. Appeal Br. 27.

We agree with the Examiner’s determination that the foregoing steps all constitute the mental process of storing and organizing data according to rules, which is one of the categories of subject matter deemed abstract under the Guidance. As the Examiner observed, “a user could simply look at particular schedules and availabilities and see conflicts when sending a particular person or resource to a specific job,” and “dragging and dropping is well-known and routine in the GUI art.” Final Act. 8–9.

Alternatively, the steps recited in claim 1 constitute managing relationships, which comprise one of the certain methods of organizing human activity deemed abstract under the Guidance. The preamble recites that the claim is directed to “managing resources for tasks,” and the Specification indicates that “resources” include human activity (e.g., employees). Spec. ¶ 3. The data storage, processing, and display elements recited in claim 1 do not make the claim any less abstract. *See Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (“[W]e have treated collecting information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas.”).

Thus, upon review of claim 1, we agree with the Examiner’s determination that the foregoing steps individually, and in combination, recite one or more of the categories deemed abstract under the Guidance.

We next proceed to Step 2A, Prong 2 of the Guidance. Under this step, if the claim “as a whole” integrates the abstract idea into a “practical application,” it is patent eligible. Appellant argues that claim 1 recites “more than just managing resources,” and also recites a “storing requirements and restrictions associated with a task in a rules database.” Appeal Br. 12; Reply Br. 5; *see also DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).

Appellant, however, does not explain, and we do not discern, any improvement in technology from the claimed invention or any other integration of the invention into a practical application. *See DDR*, 773 F.3d at 1258 (“[T]he claims at issue here specify how interactions with the Internet are manipulated to yield a desired result—a result that overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink.”); *see also Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016) (“harness[ing a] technical feature of network technology in a filtering system” to customize content filtering). The claims in *DDR*, for example, were “necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks,” *see, e.g., DDR*, 773 F.3d at 1257, but Appellant’s claim 1 recites managing resources based on rules stored in a database. Improving the functioning of a computer can reflect integration of an idea into a “practical application.” Guidance Section III; *see also DDR*, 773 F.3d 1245; *Bascom*, 827 F.3d 1341. The record does not indicate, however, that claim 1 recites any improvement of computer functioning.

Appellant also does not direct us to any evidence that claim 1 recites any unconventional rules, transforms or reduces an element to a different state or thing, or otherwise integrates the idea into a practical application. Rather, claim 1 recites managing resources for tasks according to rules. Appeal Br. 27 (Claims Appendix). Reciting a result-oriented solution that lacks any details as to how the computer performed the modifications is the equivalent of the words “apply it.” *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1341–42 (Fed. Cir. 2017) (citing *Elec. Power Grp.*, 830 F.3d at 1356 (cautioning against claims “so result focused, so functional, as to effectively cover any solution to an identified problem”)); *see also CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (mere data gathering does not make a claim patent-eligible). The storing and display elements in claim 1 do not add meaningfully to the recited mental steps or method of organizing human activity. *See supra*.

Finally, under Step 2B of the Guidance, we must look to whether the claims include any “additional limitation that is not well-understood, routine [or] conventional.” The “question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018); *see also Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d. 1314, 1325 (Fed. Cir. 2016) (holding that patent eligibility inquiry may contain underlying issues of fact).

Claim 1 recites managing resources for tasks, including storing and displaying certain elements according to rules. *See supra*. According to the

Specification, the steps of claim 1 are performed using general purpose, conventional computing devices and program instructions. Spec. ¶¶ 61–62. We agree with the Examiner’s finding that simply using standard, generic computer elements to implement the foregoing managing of resources is well understood, routine, and conventional, and is not a meaningful limitation that amounts to significantly more than an abstract idea. Ans. 6. Further, although Appellant asserts that claim 1 includes unconventional elements, Appellant provides no evidence or persuasive argument to rebut any of the Examiner’s foregoing findings. *Id.* For example, Appellant does not address the Examiner’s finding that the Specification describes only generic, standard computing elements implementing the steps in claim 1.

Accordingly, we agree with the Examiner’s determination that claim 1 merely uses computer elements in the implementation of an abstract idea, which does not equate to providing a technical solution to a technical problem. *Id.* at 10.

For the foregoing reasons, we are not persuaded of error. We sustain the rejection of claim 1 as constituting patent-ineligible subject matter. Appellant does not argue the subject matter ineligibility rejection of the remaining claims separately from claim 1. Accordingly, we also sustain the rejection of those claims.

Rejection Under Pre-AIA 35 U.S.C. § 103(a)

Appellant argues the Examiner erred in finding the prior art teaches or suggests “storing requirements and restrictions associated with a task in a rules database” and “displaying a graphical user interface including resource icons” and “a virtual service agent (VSA) icon,” as recited in claim 1. Appeal Br. 13–23. Specifically, Appellant argues that “Irwin does not

discuss storing requirements and restrictions associated with a task” and “there is no disclosure in Irwin of storing requirements and restrictions associated with a task in a rules database.” Appeal Br. 15 (emphasis omitted). Appellant contends that Irwin’s “nodes” and “resources” are not “tasks” as recited in claim 1. We, however, are not persuaded of error.

As the Examiner finds, Irwin teaches “maintain[ing]” and “stor[ing]” data representing “categorization [a task] for incoming contacts” in a network. Irwin ¶¶ 4, 11, 20; Ans. 7–8. In other words, as the Examiner finds, Irwin teaches storing requirements associated with call center routing. Irwin Fig. 2, ¶¶ 4, 11, 20. Accordingly, we discern no error in the Examiner’s conclusion that Irwin teaches the “storing” requirement in claim 1.

As to the “displaying” limitation, the Examiner relies on the combination of Irwin with Aiello and Omoigui. Final Act. 10–11. As the Examiner finds, Irwin teaches “graphical[]” display (Irwin ¶ 22), but lacks the “dragging and dropping” element recited in the claimed display. That element, however, is found in Aiello. Final Act. 11; Ans. 8; Aiello 2:52–60, 8:4–10 (describing use of a “drag-and-drop” print control display). Finally, although neither of the foregoing references disclose a “natural language” software agent as recited in the display element of claim 1, that natural language agent is found in Omoigui. Ans. 10; Omoigui ¶¶ 45, 346 (“Natural Language Parser”). Specifically, Omoigui discloses “the Natural Language Parser (NLP) preferably converts natural language text to either an API call that the SQP understands or to raw SQL (or a similar query format) that can be processed by the database [and] [passes] text directly from the semantic browser or by email via the Email Knowledge Agent.” Omoigui ¶ 654.

Appellant’s arguments, in contrast to the combination of references relied upon by the Examiner, are directed to the alleged shortcomings of Irwin, Aiello, and Omoigui individually. Appeal Br. 17–23. Because “one cannot show non-obviousness by attacking references individually where . . . the rejections are based on combinations of references,” *In re Keller*, 642 F.2d 413, 426 (CCPA 1981), we are not persuaded by Appellant’s arguments.

We are also not persuaded by Appellant’s argument that the Examiner erred in finding a rationale to combine the references. As the Examiner finds, both Irwin and Aiello “disclose interfaces where resources can be used and determined to address a variety of tasks,” and Aiello “enhances the user experience by merely introducing new features to the GUI that could allow an operator to easily view and manage the various nodes, resources, and tasks of Irwin.” Ans. 9. Accordingly, one of ordinary skill would have had reason to combine, with a reasonable expectation of success, “the interface icons and resource rules of Irwin with the interface interactions and rules and Aiello.” Ans. 9; *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007) (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”). Further, as the Examiner finds, Omoigui also is directed to evaluating resources for tasks, and predictably enhances the “user experience by allowing for users to naturally speak their desired queries.” Final Act. 12; *KSR*, 550 U.S. at 416.

Appellant does not point to any evidence of record that the resulting arrangements of the cited references were “uniquely challenging or difficult for one of ordinary skill in the art” or “represented an unobvious step over

the prior art.” *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 418–19). The Examiner’s findings are reasonable because the skilled artisan would “be able to fit the teachings of multiple patents together like pieces of a puzzle” since the skilled artisan is “a person of ordinary creativity, not an automaton.” *KSR*, 550 U.S. at 420–21. We are persuaded the claimed subject matter exemplifies the principle, “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 550 U.S. at 416.

For the foregoing reasons, we are not persuaded the Examiner erred in rejecting claim 1.

Appellant argues claim 8 separately, contending that the Examiner erred in combining the references and “does not identify ‘the algorithm’ allegedly enhanced” cited as the reason for combining references. Appeal Br. 25. As the Examiner finds, however, Tarighat discloses a “method of constructing a *trading algorithm* using a graphical user interface,” including “displaying . . . drag and droppable widgets within a computer generated graphical environment.” Tarighat ¶ 21; Final Act. 18. Accordingly, Tarighat enhances the “drag and drop” feature of the Irwin/Aiello/Omoigui combination. The Examiner finds that one of ordinary skill in the art would have been familiar with each of the foregoing elements and that their combination would have yielded the predictable result of an enhanced drag-and-drop display. Final Act. 18; *KSR*, 550 U.S. at 416. Appellant’s unsupported argument does not, in our view, sufficiently rebut the Examiner’s finding. We, therefore, are unpersuaded of error regarding claim 8.

For the foregoing reasons, we sustain the obviousness rejections of claims 1 and 8. The remaining claims are not argued separately. We, therefore, also sustain the rejections of remaining claims 2–7, 9, and 11–17.

SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–9, 11–17	101	Eligibility	1–9, 11–17	
1–7, 17	103	Irwin, Aiello, Omoigui	1–7, 17	
8, 11–16	103	Irwin, Aiello, Omoigui, Tarighat	8, 11–16	
9	103	Irwin, Aiello, Omoigui, Weyl	9	
Overall Outcome			1–9, 11–17	

DECISION

We affirm the Examiner’s decision rejecting claims 1–9 and 11–17.

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