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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ARUN KOORMAMTHARAYIL, SAJAL KUM DAS, and
SREEKUMAR ASHOK

Appeal 2018-002277
Application 15/016,563
Technology Center 2600

Before JAMES R. HUGHES, SCOTT E. BAIN, and
JULIET MITCHELL DIRBA, *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 11–20, 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 parties in interest as Hewlett-Packard Development Company, LP, HP Inc., and HPQ Holdings, LLC. Appeal Br. 3.

BACKGROUND

The Claimed Invention

Appellant’s claimed invention relates to selecting a printer for a print job, and specifically, to optimizing selection among available printers. Spec. ¶ 9. Claims 1, 9, and 13 are independent. Claim 1 is illustrative of the invention and the subject matter of the appeal, and reads as follows (with disputed limitation emphasized):

1. A method comprising:
in an electronic device, in response to a print job,
identifying active printers associated with a location for the electronic device, wherein the location is selected by user input to the electronic device; and
in the electronic device, prioritizing the identified active printers to process the print job based at least in part on the location for the electronic device and statuses associated with the printers.

Appeal Br. 22 (Claims Appendix) (emphasis added).

References

The references relied upon by the Examiner are:

Name	Reference	Date
Monden	US 2015/0070725 A1	Pub. Mar. 12, 2015
Yagita	US 2007/0103710 A1	Pub. May 10, 2007
Cain	US 2010/0073712 A1	Pub. Mar. 25, 2010
Nagai et al. (“Nagai”)	US 2012/0133982 A1	Pub. May 31, 2012

The Rejections on Appeal²

Claims 1–9 and 11–20 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 10–14; Ans. 26.

² In addition to the pending rejections, the Examiner objects to claims 17, 18, and 20 in light of an apparent typographical error by Appellant. Ans. 2. The objections are not subject to appeal to the Board. See 37 C.F.R. § 1.113.

Claims 1, 2, 4–9, and 12–19 stand rejected under 35 U.S.C. § 103 as unpatentable over Monden and Yagita. Final Act. 14–28.

Claim 3 stands rejected under 35 U.S.C. § 103 as unpatentable over Monden, Yagita, and Cain. Final Act. 29–30.

Claims 11 and 20 stand rejected under 35 U.S.C. § 103 as unpatentable over Monden, Yagita, and Nagai. Final Act. 30–33.

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 regarding the Examiner’s ineligible subject matter rejection. Appellant has persuaded us the Examiner erred in the obviousness rejections of dependent claims 6–8, but not as to any of the other claims. Except as set forth 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 discussion for highlighting and emphasis.

Rejection Under 35 U.S.C. § 101

The Examiner determined that claim 1 is directed to “prioritizing printers based on locations and statuses of printers,” which constitutes a mental process or method of organization human activity, and, therefore, is an abstract idea. Final Act.; Ans. 26–29; *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 the additional elements in claim 1 merely constituted conventional steps performed on a generic computer, and therefore did not include additional elements sufficient to amount to significantly more than the abstract idea. Ans. 29–30. Accordingly, the Examiner concluded that the claims constitute ineligible subject matter.

Appellant argues that claim 1 “sets forth a specific method to improve the way an electronic device operates,” namely, by allowing “an electronic device to efficiently handle or process a print job.” Appeal Br. 8–9; Reply Br. 1–3. Specifically, Appellant argues that the claims are directed to a “particular manner of summarizing and presenting information graphically in a common display window.” Reply Br. 6.

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. *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. 56 (collectively “Step 2B”).

We begin our review with Step 2A, Prong One of the Guidance, as applied to Appellant’s claim 1.³ Claim 1 recites “a method” in an electronic device, comprising the following elements: (1) in response to a print job, identifying active printers associated with a location of the device; (2) the location is selected by user input to the device; and (3) prioritizing the active printers based on location and printer statuses. Appeal Br. 22. Upon review of the foregoing steps in claim 1, we agree with the Examiner’s determination that these steps merely constitute the idea of prioritizing printers based on location and status, which is a “process that could be performed by a human mentally or using a pen and paper.” Ans. 28–29.

A human could identify an active printer in a particular location, and record that printer. A human then could decide to select that printer. And finally, a human could reorder a list of active printers based on location and

³ 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.

status, by changing the order of a list on paper. In short, each of the foregoing elements either recites collecting data relating to printers (location or status) or organizing a printer list based upon that data. As the Examiner determined, a human could, mentally or using a pen and paper, determine the location and status of an electronic device and printers, and prioritize printers accordingly. Ans. 28.

Accordingly, like the data collection and analysis in *Electric Power Group*, claim 1 recites a mental process, which is one of the categories of subject matter deemed abstract under the Guidance. *Electric Power Group, LLC, v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (“[W]e have treated analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category”); *id.* at 1353 (“[W]e have treated collected information, including when limited to particular content (which does not change its character as information), as within the realm of abstract ideas.”).

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 “enhance[s] the operation of the computer system” by “prioritiz[ing] the identified active printers to process a print job.” Reply Br. 1; *see also DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014).

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 Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016). Appellant, however, does not explain, and we do not discern, any improvement in technology from the claimed invention.

Compare DDR, 773 F.3d at 1258 (Fed. Cir. 2014) (“the 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.”) (emphasis added); *see also Bascom*, 827 F.3d at 1350 (“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 a printer prioritizing method that merely uses generic computing elements. *See, e.g., Spec. 15* (describing generic processors, memory, and other “hardware components”).

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 printer prioritization by collecting data on printer location and status, according to algorithms not recited in the claim and only vaguely referenced in the Specification. App. Br. 22 (Claims App.). 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. 2015) (citing *Elec. Power Grp., LLC, v. Alstom S.A.*, 830 F.3d 1350, 1356 (Fed. Cir. 2016) (cautioning against claims “so result focused, so functional, as to effectively cover any solution to an identified problem”)); *see also CyberSource v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) (mere data gathering does not make a claim patent-

eligible). The data gathering and processing steps in claim 1 do not add meaningfully to the recited mental processes.

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 a printer prioritization method by data gathering and processing steps. *See supra*. We agree with the Examiner’s finding that simply using standard computer elements (as described in the Specification, *see supra*) to implement printer priority is well understood, routine, and conventional, and is not a meaningful limitation that amounts to significantly more than an abstract idea. Ans. 29; *see supra*. Appellant asserts that claim 1 recites a “specific, concrete way to select and prioritize active printers for a print job,” which improves computer performance. Reply Br. 3. The language of claim 1, however, contradicts Appellant’s assertion. The claim recites no particular algorithm, relationship, or hardware (other than a generic “device” and “printers”). Thus, we agree with the Examiner’s determination that any “hardware components are simply a conduit for the abstract idea,” and “not significantly more than the abstract idea identified above.” Ans. 29.

We, therefore, 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. Appeal Br. 10. Accordingly, we also sustain the rejection of those claims.

Rejections Under 35 U.S.C. § 103

Appellant argues the Examiner erred in finding the prior art teaches or suggests “identifying active printers associated with a location for the electronic device, wherein the location is selected by user input,” as recited in claim 1. Appeal Br. 11–12; Reply Br. 5. Specifically, Appellant contends the Examiner relies on Monden as teaching this limitation, but that Monden “merely describes a printer list screen” that “includes a distance to user,” “obtains location data,” and updates the location data “in case location of the printer . . . changes.” Appeal Br. 11–12. Appellant further contends that Monden does not teach “user input” selecting a location. We, however, are not persuaded of error.

As the Examiner finds, Monden describes identifying active printers and their respective locations. Ans. 31; Monden Fig. 15; ¶¶ 83, 144. Monden further describes a variety of user input, including viewing the “document list being displayed, to *select* document data,” and “*user instruction* regarding print settings.” Ans. 31; Monden ¶ 83 (emphases added). Further, Monden describes “*in response to the user selection* of the document data,” the “instruction device 102 of the portable terminal 1 sends a request for obtaining *location data* of the terminal 1,” and the “instruction device 102 sends a request for a compatible printer list, which includes the selected document data and the location data of the portable terminal 1.” Monden ¶¶ 131–32 (emphases added). Accordingly, as the Examiner

determines, Monden teaches it is “user selection” (i.e., user input) that identifies the “location for the electronic device,” just as in Appellant’s claim 1. Ans. 31–32.

We, therefore, are unpersuaded the Examiner erred in rejecting claim 1. For the same reasons, we are unpersuaded of error regarding independent claims 9 and 13.

Appellant also argues the Examiner erred as to dependent claims 6–8, 17, and 20. We are persuaded of error regarding the obviousness rejection of claims 6–8, but not as to the remaining claims. We address each in turn, below.

Dependent claim 6 recites “the electronic device *overriding* the selection in response to a determination that the selected printer has become unavailable.” Appeal Br. 23. The Examiner finds Monden teaches such overriding in its description of “updating” a printer list based upon a change in device data. Ans. 32; Monden Fig. 18, ¶ 171. The Examiner explains, “the newly updated printer list overrides the previously updated and displayed list of printers and [the] user is only able to select available printers from the updated list of printers.” Ans. 32. Claim 6, however, recites overriding “the selection,” which is a “user selection of one of the printers” via “the graphical interface.” Appeal Br. 23 (Claims Appendix). We agree with Appellant’s argument, *id.* 12–13, that overriding the list of available printers, as Monden teaches, is not the same as teaching overriding a user selection, as in claim 6. Accordingly, we are persuaded of error regarding the rejection of claim 6. Claim 7 depends from claim 6 and thus includes the same disputed limitation. Thus, we are also persuaded of error regarding claim 7.

Dependent claim 8 recites “identifying printers associated with a future location for the electronic device.” Appeal Br. 23. The Examiner finds Monden teaches “the user at the portable terminal may move (i.e.,) the user movement initiates a future location), for example, while displaying the printer list,” and “the printer list is updated based on the movement of the mobile device.” Ans. 33; Monden ¶¶ 131–32, 171. As Appellant argues, however, real-time updating of the available printer list based on device movement is not the same as identifying printers associated with a “future location.” Reply Br. 7. Rather, Monden teaches identifying printers associated with a current location, and when the current location changes, the list updates to a new current location. Accordingly, we are persuaded of error regarding claim 8.

Appellant’s remaining arguments are unpersuasive. Regarding dependent claim 17, as the Examiner concludes, Monden teaches or suggests identifying “candidate printers based on a set of printers for the location identified by user input” for reasons similar to claim 1. Ans. 34–35. Namely, Monden teaches user input identifying device location, and providing a list of available printers based on that location. *Id.*; Monden ¶¶ 83, 131–32, 144.

Regarding dependent claim 20, as the Examiner concludes, the combination of Monden and Yagita teaches or suggests identifying “the plurality of candidate printers based on a set of installed printer drivers.” Appeal Br. 25; Ans. 36. As discussed above, Nagai teaches installed printer drivers corresponding to a plurality of printers, Nagai ¶ 33, which one of ordinary skill would understand, when incorporated into Monden, would accurately display printers satisfying the claimed conditions. Ans. 36; Final

Act. 32–33. We further agree, as the Examiner determines, that one of ordinary skill would have recognized that Nagai’s printer drivers incorporated into Monden would have advantageously enabled exclusion (from the display list) of any printers incapable of printing, and if such printers are still displayed, to permit a user to “recognize . . . defects [in such] printers.” Final Act. 32–33. We are unpersuaded by Appellant’s arguments regarding Monden and Nagai individually. Appeal Br. 20–21; *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (“Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.”).

For the foregoing reasons, we sustain the obviousness rejections of claims 1–5, 9, and 11–20, and we do not sustain the obviousness rejections of claims 6–8.

SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–9, 11–20	101	Ineligible Subject Matter	1–9, 11–20	
1, 2, 4–9, 12–19	103	Monden, Yagita	1, 2, 4, 5, 7, 9, 12–19	6–8
3	103	Monden, Yagita, Cain	3	
11, 20	103	Monden, Yagita, Nagai	11, 20	
Overall Outcome			1–9, 11–20	

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DECISION

We affirm the Examiner's decision rejecting claims 1–9 and 11–20.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED