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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS CHARLES STICKLE¹

Appeal 2017-010686
Application 13/792,399
Technology Center 2400

Before JAMES R. HUGHES, ERIC S. FRAHM, and
MATTHEW J. McNEILL, *Administrative Patent Judges*.

HUGHES, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant seeks our review under 35 U.S.C. § 134(a) of the Examiner's final decision rejecting claims 1–18 and 20–24. Claim 19 has been canceled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ According to Appellant, the real party in interest is Amazon Technologies, Inc. App. Br. 2.

Appellant's Invention

The invention generally relates to tracking application usage for licensing purposes in a computing environment that employs virtual machines and associated storage volumes. *See* Spec. ¶¶ 1, 9–13. More specifically, the invention obtains an application identifier of a copy of an application installed on a storage volume, obtains a storage volume block identifier of the storage volume, and, using an application programming interface (API), generates a usage report upon installation or upon each execution of the application. Spec. ¶¶ 23, 25, 26, 31–32, 37, 46. The API transmits the usage report to an application usage service or a client where the usage report data can be viewed through an interface. Spec. ¶¶ 39–43.

Representative Claim

Independent claim 1, reproduced below, further illustrates the invention:

1. A non-transitory computer-readable medium storing an application executable in a computing device, wherein when executed the application causes the computing device to at least:

provide an application program interface, executable in the computing device, that defines a network service call to facilitate submission of a usage report generated by the application program interface;

determine that the application is executed or installed in a virtual machine instance in a computing environment, the virtual machine instance being associated with a storage volume in the computing environment, wherein the application is installed on the storage volume;

define an application identifier to include in the usage report, the application identifier uniquely identifying one execution or installation of the application installed on the storage volume of the virtual machine instance with respect to other executions or installations of the application;

define a storage volume block identifier to include in the usage report, the storage volume block identifier uniquely identifying the storage volume where the application is installed, with respect to other storage volumes of the virtual machine instance in the computing environment, the storage volume block identifier further being uniquely associated with one of the storage blocks with respect to other storage blocks in the storage volume;

monitor usage data corresponding to the application in the virtual machine instance to include in the usage report, the usage data comprising at least one of a time of execution or an installation date; and

submit the usage report to a client via the application program interface each time it is determined that the application is executed or installed, allowing the client to track the usage data.

Rejections on Appeal

The Examiner rejects claims 1–18 and 20–24 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Ans. 2–16.²

The Examiner rejects claims 1–18 and 20–24 under 35 U.S.C. § 103(a) as being unpatentable over Nickolov (US 2009/0276771 A1; Nov. 5, 2009), Maki (US 2012/0011394 A1; Jan. 12, 2012), and Rowles (US 2013/0339284 A1; Dec. 19, 2013). Final Act. 2–28.

² The § 101 rejection was entered as a new ground of rejection in the Answer with Technology Center Director approval. See Ans. 31.

ANALYSIS

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. 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 (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.* 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 claim is directed to a judicial exception, such as an abstract idea, the second step is to determine whether additional elements in the claim “‘transform the nature of the claim’ into a patent-eligible application.” *Id.* at 2355 (quoting *Mayo*, 566 U.S. at 78). 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 . . .

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the [ineligible concept] itself.” *Id.* at 2355 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

Statutory Categories Under § 101

The Examiner finds claims 4–14 do not fall within any of the statutorily defined categories of “process, machine, manufacture, or composition of matter, or any new and useful improvement thereof,” under § 101. Ans. 2–3. Specifically, the Examiner finds that although independent claim 4 is nominally directed to a “system,” a “system must be defined by at least two elements.” Ans. 2. The Examiner finds dependent claims 5–14 “do not further teach about the system being more than one element.” Ans. 3. Appellant contends claims 4–14 qualify as a “machine” under §101. Reply Br. 3. We agree with Appellant.

Even if, as the Examiner asserts, a “machine” requires at least two elements, Appellant’s claims 4–14 meet this standard. The broadest reasonable interpretation of the claimed “computing device” that is consistent with the Specification requires at least a processor and a memory. *See Spec.* ¶ 51. And in any case, claim 4 itself recites multiple concrete parts in addition to the claimed “computing device,” including “a network” and “a data store.” Accordingly, we find claims 4–14 properly fall within the statutory category of “machine” under §101.³

³ We note, however, that for a patent-eligibility analysis, rather than looking at “what statutory category . . . a claim’s language is crafted to literally invoke, we look to the underlying invention.” *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1374 (Fed. Cir. 2011). We find claims 4–14 are not patent-eligible for the same reasons, discussed in detail below, as claims 1–3, 15–18, and 20–24.

Alice Step One

Regarding steps one and two of the *Alice* framework, Appellant nominally argues the groups of claims 1–3, 4–14, and 15–18 and 20–24 separately. *See* Reply Br. 4–34. However, Appellant raises similar arguments for each of the claim groups. *See id.* Accordingly, we address claim 1 as representative of all claims in our analysis below. *See* 37 C.F.R. § 41.37(c)(1)(iv).

After determining that the claims nominally fall within a statutory category, “the first step in the *Alice* inquiry . . . asks 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 LLC v. Microsoft Corp.*, 822 F.3d 1327, 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 Am. 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.

Appellant contends, noting that the Federal Circuit has endorsed comparing claims in a patent-eligibility analysis to claims of a similar descriptive nature in other cases, *see Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016), that the claims in the present case are not analogous to the patent-ineligible claims in either *FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089 (Fed. Cir. 2016)

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or *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016). Reply Br. 4–9. We disagree with Appellant.

The Examiner finds claim 1 is directed to “generating a usage report each time an application is installed to track the usage of the application,” which is similar to the concepts identified in the patent-ineligible claims in *FairWarning* and *Electric Power*. Ans. 4. The Federal Circuit in *FairWarning* noted that “the ‘realm of abstract ideas’ includes ‘collecting information, including when limited to particular content,’” “‘analyzing information by steps people go through in their minds, or by mathematical algorithms, without more,’” and “‘merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation).’” *FairWarning*, 839 F.3d at 1093 (citing *Elec. Power*, 830 F.3d at 1353). The court then found the claims at issue were “directed to a combination of these abstract-idea categories” because they were “directed to collecting and analyzing information to detect misuse and notifying a user when misuse is detect.” *Id.* at 1094. The Federal Circuit in *Electric Power* found the claims at issue were directed to a similar combination of abstract ideas relating to data collection, analysis, and presentation. *See* 830 F.3d at 1353–54.

Here, claim 1 is focused on obtaining information, specifically, the “application identifier,” “storage volume block identifier,” and “usage data,” including this information in a “usage report,” and submitting the “usage report” to a client, thereby “allowing the client to track the usage data.” We find this claim 1 functionality is no less abstract than the functionality of the claims in *FairWarning* and *Electric Power*. It matters not that claim 1 specifically defines the obtained information—“the application identifier uniquely identif[ies] one execution or installation of the application installed

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on the storage volume of the virtual machine instance,” “the storage volume block identifier uniquely identif[ies] the storage volume where the application is installed,” and “the usage data compris[es] at least one of a time of execution or an installation date”—because, as the court in *FairWarning* noted, “collecting information . . . limited to particular content” is still an abstract idea. 839 F.3d at 1093. Further, claim 1 does not specify that including the collected information in a usage report for submission to a client requires any more than “analyzing information by steps people go through in their minds, or by mathematical algorithms.” *Id.* Finally, although claim 1 submits the usage report to a client, claim 1 does not specify any particular way by which the client can track the usage data, let alone “identif[y] a particular tool for presentation.” *Id.* Accordingly, we agree with the Examiner (Ans. 4) that the idea to which claim 1 is directed—“generating a usage report each time an application is installed to track the usage of the application”—combines abstract data collection, analysis, and presentation concepts similarly to the claims in *FairWarning* and *Electric Power*.

Appellant also contends the claims are not directed to an abstract idea because the claims “are not simply directed to tracking application usage in the abstract, but are instead specifically directed to a technical approach” Reply Br. 10–11. However, claim 1 does not define any specific way of performing the functions recited such that “the focus of [claim 1] is on the specific asserted improvement in computer capabilities.” *Enfish*, 822 F.3d at 1335–36. That is, claim 1 focuses on what information is included in a usage report when an application is executed or installed, without describing any technical details of how the identifiers are defined, how the usage data is monitored, or how the usage report is submitted. In other words, claim 1

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does not “focus on a specific means or method that improves the relevant technology,” but rather is “directed to a result or effect that itself is the abstract idea and merely invoke[s] generic processes and machinery.”

McRO, 837 F.3d at 1314.

Appellant further contends that, like the claims in *McRO*, “the present claims are similarly patent-eligible subject matter by including specific rules using particular information and technique through the technical approach discussed above.” Reply Br. 11–12. However, we see no specific rules recited in claim 1 that, like in *McRO*, define a process that is different than a process previously performed by humans. *See* 837 F.3d at 1314. Rather, it would be possible for a person to install an application in a virtual machine associated with a storage volume in a computing environment, look up application and storage volume block identifiers and usage data for the application, put the identifiers and usage data in a report, and send the report. While claim 1 recites an application program interface to “facilitate submission of a usage report generated by the application program interface,” the application program interface merely automates what could otherwise be a human process. The Federal Circuit in *McRO* distinguished the patent-eligible claims from such claims “where the claimed computer-automated process and the prior method were carried out in the same way.” *Id.*

Therefore, we find claim 1 is directed to an abstract idea, and proceed to step two of the *Alice* framework.

Alice Step Two

The second step in the *Alice* analysis requires a search for an “inventive concept” that “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). There must be more than “computer functions [that] are ‘well-understood, routine, conventional activit[ies]’ previously known to the industry.” *Alice*, 134 S. Ct. at 2359 (second alteration in original) (quoting *Mayo*, 566 U.S. at 73).

Appellant contends the claims involve a “technical approach [that] amounts to significantly more than an abstract idea at least because unlike existing technologies, it enables tracking application usage where the environment can be created and terminated in rapid fashion or on an on-demand basis.” Reply Br. 14. However, as discussed above, claim 1 does not provide the technical details of how the claimed functions are performed, let alone require the functions be performed in response to “rapid fashion” changes in the computing environment, or “on an on-demand basis.” Even if claim 1 included the language “rapid fashion” and “on-demand” from Appellant’s argument (*id.*), merely making the practice of an abstract idea more efficient by implementing the idea with a computer does not suffice to meet the inventive concept requirement of *Alice*. See *OIP Technologies Inc. v. Amazon.com Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (“[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible.”)

Appellant also contends that, like the claims in *Amdocs*, “the claims here recite an unconventional approach that involves the specific technical approach discussed above.” Reply Br. 14. That is, “[e]ven if certain elements of the claims were considered generic, which Appellant denies, this combination of elements renders these claims ‘not merely the “routine or conventional” use of technology.’” *Id.* (citing *Amdocs*, 841 F.3d at 1302).

However, Appellant has not specifically identified any elements that are not conventional, nor has Appellant specifically explained what it is about the combination of elements in claim 1 that renders it a non-conventional arrangement of conventional elements. *See Bascom*, 827 F.3d at 1349–50.

Accordingly, we are not persuaded claim 1 amounts to significantly more than the abstract idea itself. We are not, therefore, persuaded the Examiner erred in rejecting claim 1, and claims 2–18 and 20–24 which we group therewith, as patent-ineligible.

Obviousness

The Examiner finds the combination of Nickolov, Maki, and Rowles discloses all the limitations of independent claim 1, including that Rowles teaches “submit the usage report to a client via the application program interface each time it is determined that the application is executed or installed.” Final Act. 2–7; Ans. 20–22. Appellant contends Rowles does not send a report upon execution or installation of an application, but upon uninstallation, and therefore fails to teach the limitation for which it is relied upon. App. Br. 9–10; Reply Br. 39–40. We agree with Appellant.

Rowles describes tracking and reporting software usage duration by a process on a client system. Rowles, ¶ 17. Specifically, Rowles describes the following:

In the example shown, a check is performed to determine which applications (or other software) are installed on the device (402). If newly-installed applications are found to be present (404), they are added to a local list of installed applications (406), such as the one shown in FIG. 2. *If applications are found to have been uninstalled* (e.g., they are on the current list but not found to be present in the current check, performed periodically, in dynamic reaction to a predefined system event such as application install

or uninstall, and/or at startup, for example) (408), *the local list is updated and a report is sent to a remote service*, such as the tracking service 114 of FIG. 1 (410), indicating in some embodiments the application, the date/time it was installed, the date/time it was uninstalled, and depending on the embodiment additional information such as an identification of the client and/or relevant attributes thereof.

Id. (emphasis added). Here, we find Rowles discloses performing a periodic check to determine which applications are installed on a device. *Id.* If an application is newly installed, it is added to a local list. *Id.* If an application is found to be uninstalled, which is evident when an application is on the local list, but not found to be present during a current check, then “the local list is updated and a report is sent to a remote service.” *Id.* Accordingly, although a periodic check may be performed in response to an application installation, uninstallation, or at startup, Rowles only discloses sending a report when a check confirms there has been an uninstallation. *See id.* We thus find Rowles does not teach “submit the usage report to a client via the application program interface *each time* it is determined that *the application is executed or installed,*” as recited in claim 1.

We are, therefore, constrained by the record to find the Examiner erred in rejecting independent claim 1, independent claim 4 and 15 which recite commensurate limitations, and dependent claims 2, 3, 5–14, 16–18, and 20–24.

CONCLUSIONS

Appellant has not shown the Examiner erred in rejecting claims 1–18 and 20–24 under 35 U.S.C. § 101.

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Appellant has persuaded us the Examiner erred in rejecting claims 1–18 and 20–24 under 35 U.S.C. § 103(a).

DECISION

We affirm the Examiner’s decision to reject claims 1–18 and 20–24 because we sustain at least one ground of rejection for each claim. *See* 37 C.F.R. § 41.50(a)(1) (“The affirmance of the rejection of a claim on any of the grounds specified constitutes a general affirmance of the decision of the examiner on that claim, except as to any ground specifically reversed.”).

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. § 41.50(f).

AFFIRMED