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WORKMAN NYDEGGER/MICROSOFT
60 EAST SOUTH TEMPLE
SUITE 1000
SALT LAKE CITY, UT 84111

EXAMINER
LE, DIEU MINH T

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JACKSON DAVIS, TAE HYUNG KIM, COLIN A. THOMSEN, AND STEVE CARROLL

Appeal 2018-006121
Application 14/563,822
Technology Center 2100

Before JENNIFER L. McKEOWN, CARL L. SILVERMAN and JASON M. REPKO, *Administrative Patent Judges*.

McKEOWN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants[1] appeal under 35 U.S.C. § 134(a) from the Examiner's decision to reject claims 1–20. We have jurisdiction under 35 U.S.C. § 6.

We reverse.

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[1] According to Appellants, the real party in interest is Microsoft Corporation. App. Br. 3.

STATEMENT OF THE CASE

Appellants' disclosed and claimed invention is "[a] debugging and diagnostics system allow[ing] users to take lightweight process snapshots of running debuggee processes so the users may analyze those snapshots at a later time." Abstract. "The snapshot mechanism further allows users to inspect a snapshot of process memory while allowing the original process to continue running with minimal impact." Abstract.

Claim 1 is illustrative of the claimed invention and reads as follows:

> 1. In a computing environment, a method of debugging an executing process, the method comprising:
>
> simultaneously running, independently, an executing process and a snapshot of the executing process, wherein the executing process and the snapshot point to a same physical memory address; and
>
> analyzing data collected from the snapshot, using a debugging tool associated with the snapshot, without affecting the executing process.

THE REJECTIONS[2]

The Examiner rejected claims 1–20 under 35 U.S.C. § 101 as directed to patent ineligible subject matter. Final Act. 2–3.

The Examiner rejected claims 1–20 under 35 U.S.C. § 103 as unpatentable over Law (US 2012/0096441 A1; pub. Apr. 19, 2012) and Brodeur (2002/0087950 A1; pub. July 4, 2002). Final Act. 4–13.

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[2] We note that the Examiner withdraws the enablement rejection under 35 U.S.C. § 112 (a) and the new matter objection under 35 U.S.C. § 132(a). *See* Ans. 17.

ANALYSIS

THE REJECTION UNDER 35 U.S.C. § 101

Based on the record before us, we are persuaded that the Examiner erred in rejecting claims 1–20 as patent ineligible.

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, 82 (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 Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S.Ct. 2347, 2355 (2014). The first step in that analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts" (*id.*), for example, to an abstract idea. If the claims are directed to one of the patent-ineligible concepts, the inquiry proceeds to the second step where the elements of the claims are considered "individually and 'as an ordered combination"' to determine whether there are additional elements that "'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S.Ct. at 2355 (quoting *Mayo*, 132 S.Ct. at 1297).

With respect to step one of the eligibility analysis, the Examiner finds that the claims are directed to the abstract idea, namely "an idea of itself of collecting information/data, analyzing it, and displaying certain results of the collection and analysis." Final Act. 2. The Examiner finds that this claimed concept is similar to the collecting, analyzing, and displaying of information that were found to be abstract in *Electric Power Group, LLC, v. Alstom*, 830 F.3d 1350 (Fed. Cir. 2016). *Id; see also* Ans. 19 (finding that "[t]he concept described in claims are [sic] not meaningfully different than the collecting,

analyzing and displaying information from resulting of analyzing concepts found by the courts to be abstract ideas in *Electric Power Group*."). Under step two of the eligibility analysis, the Examiner determines that the claims do not amount to significantly more than the abstract idea. Final Act. 3; *see also* Ans. 20–21.

Appellants argue that the claims are not directed to an abstract idea and that the claims are directed to significantly more than the alleged abstract idea. App. Br. 8–9. Namely, the claims do more than merely gathering and analyzing information and then displaying results as found by the Examiner. *See* App. Br. 8. Appellants assert that "unlike *Electric Power Group*, the claims on appeal require inventive technology for performing those functions, such as by running both an executing process and a snapshot of the executing process that point to a same physical memory address." App. Br. 8. Further, Appellants explain that "the pending claims require a unique and inventive configuration that allows by both an executing process and a snapshot of the executing process that point to a same physical memory address to run independently and simultaneously." App. Br. 9.

We are persuaded of error in the Examiner's rejection. We agree with Appellants that the claims are not directed to merely collecting, analyzing, and displaying information like in *Electric Power Group*. Instead, the claims are directed to a debugging method that requires simultaneously running, an independent snapshot of the executing process and also requires both the executing process and the running snapshot "to point to a same physical memory address." *See, e.g.*, App. Br. 7–10. Further, as Appellants point out,

> The limitations of Claim 1 require more than an abstract idea. Claim 1 requires a new source of information - a shared physical memory - that is used by two processes. When the snapshot process is analyzed, the executing process cannot be affected. This is more than mere off-the-shelf, conventional computer technology. Claim 1 requires an inventive device (shared physical memory) and technique (analyzing data collected from the snapshot without affecting the executing process).

App. Br. 10. As such, we agree that the Examiner erred in rejecting the claims are directed to patent ineligible subject matter.

Accordingly, we reverse the Examiner's decision to reject claims 1–20 as directed to patent ineligible subject matter.

THE OBVIOUSNESS REJECTION UNDER 35 U.S.C. § 103 BASED ON LAW AND BRODEUR

Based on the record before us, we are persuaded that the Examiner erred in rejecting claims 1–20 as unpatentable over Law and Brodeur.

Appellants argue that the combination of Law and Brodeur does not teach or suggest simultaneously running, independently, an executing process and a snapshot of the executing process, as required by the claims. App. Br. 18–19. Appellants explain that

> Claim 1 does not require a static, one-time version of a working memory space as taught in *Law*. Instead, in Claim 1, "the executing process and the snapshot point to a same physical memory address" while the executing process and the snapshot of the executing process are "simultaneously running, independently." Because *Law* does not teach a running "snapshot of the executing process," *Law* does not teach or suggest this limitation of Claim 1.

App. Br. 19.

The Examiner maintains that Law describes concurrent memory access by multiple threads and regularly snapshotting the process as it runs and running the appropriate snapshot forward to find the process' state at any given time. Ans. 25. As Appellants point out, though, Law merely creates static snapshots, not *a running snapshot of the executing process*. *See, e.g.*, Law ¶ 46. As such, on the record before us, we are persuaded of error in the Examiner's rejection.

Accordingly, we reverse the Examiner's decision to reject claims 1–20 as unpatentable over Law and Brodeur.

DECISION

We reverse the Examiner's decision to reject claims 1–20.

REVERSED