UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ADAM C. GEHEB, PRASANNA R. JOSHI,
and APURVA S. PATEL

Appeal 2018-000227
Application 14/611,587
Technology Center 2100

Before DENISE M. POTHIER, CATHERINE SHIANG, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

SHIANG, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's final
rejection of claims 1–7, which are all the claims pending and rejected in the
application. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

STATEMENT OF THE CASE

Introduction

According to the Specification, the present invention relates to
computer program development, and more specifically to implementing
changes in a computer program. *See generally* Spec. 1. Claim 1 is
exemplary:

1. A method, comprising:

identifying a fix defining a plurality of unique changes to a computer program;

applying the fix, including the plurality of unique changes, to the computer program to generate a test version of the computer program and, as each of the plurality of unique changes is applied, identifying, in real time using a processor, program code units in the computer program changed by the unique changes and generating corresponding data entries in a first data structure;

determining a number of test cases available to test the program code units in the computer program changed by the unique changes by accessing the data entries in the first data structure and matching, using the processor, each of the program code units to corresponding data entries contained in a second data structure that correlates program code units to test cases;

responsive to determining the number of test cases available to test the program code units in the computer program changed by the unique changes, automatically generating, using the processor, a test readiness index indicating a readiness of the fix to be tested, the test readiness index based on a number of unique changes to the computer program defined by the fix and the number of test cases available to test the unique changes to the computer program defined by the fix; and

outputting the test readiness index.

Rejection[1]

Claims 1–7 stand rejected under 35 U.S.C. § 101 because they are directed to patent ineligible subject matter.

ANALYSIS

We have reviewed the Examiner's rejection in light of Appellants' contentions and the evidence of record. We concur with Appellants'

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[1] The Examiner withdrew a non-statutory double patenting rejection of claims 1–7. Ans. 3.

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contention that the Examiner erred in finding claims 1–7 are directed to patent ineligible subject matter. *See* Appeal Brief filed March 27, 2017 ("Appeal Br.") 9–22; Reply Brief filed October 9, 2017 ("Reply Br.") 2–9.

Section 101 of the Patent Act provides "[w]hoever 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." 35 U.S.C. § 101. That provision "'contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.'" *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014) (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013)). According to the Supreme Court:

> [W]e set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. . . . If so, we then ask, "[w]hat else is there in the claims before us?" . . . To answer that question, we consider the elements of each claim both individually and "as an ordered combination" to determine whether the additional elements "transform the nature of the claim" into a patent-eligible application. . . . We have described step two of this analysis as a search for an "'inventive concept'" —*i.e.,* an element or combination of elements that is "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself."

Alice Corp., 134 S. Ct. at 2355.

The Federal Circuit has described the *Alice* step-one inquiry as looking at the "focus" of the claims, their "character as a whole," and the *Alice* step-two inquiry as looking more precisely at what the claim

elements add—whether they identify an "inventive concept" in the application of the ineligible matter to which the claim is directed. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016); *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015). For the reasons discussed below, we proceed to *Alice* step-two analysis.

In *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (2014), the Federal Circuit determines the claims satisfy *Alice* step two because "the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." *DDR Holdings*, 773 F.3d at 1257. As a result, the *DDR* court holds the claims are patent eligible regardless of whether they are characterized as an abstract idea under *Alice* step one. *See DDR Holdings*, 773 F.3d at 1257.

Similar to the claims in *DDR*, the claims here are necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer program development. *See* claims 1–7; *DDR Holdings*, 773 F.3d at 1257; *see also* Spec. 1–3. As a result, the claims are patent eligible regardless of whether they are characterized as an abstract idea under *Alice* step one. *See DDR Holdings*, 773 F.3d at 1257.

In particular, the claims address the problem of errors in computer programs. *See* claims 1–7; *see also* Spec. 1–3. To that end, the claims provide an improved method for implementing changes in a computer program to fix errors. *See* claims 1–7. For example, independent claim 1 recites a method comprising the steps of

identifying a fix defining a plurality of unique changes to a

> computer program; applying the fix . . . to the computer
> program to generate a test version of the computer program
> and. . . identifying, . . . program code units . . . changed by the
> unique changes and generating corresponding data entries in a
> first data structure; determining a number of test cases available
> to test the program code units . . . changed by the unique
> changes . . . and matching . . . each of the program code units to
> corresponding data entries contained in a second data structure
> that correlates program code units to test cases; responsive to
> determining the number of test cases available to test the
> program code units in the computer program changed by the
> unique changes, automatically generating . . . a test readiness
> index indicating a readiness of the fix to be tested . . . ; and
> outputting the test readiness index.

Claim 1. Claims 2–7 depend on claim 1, and include all of the above detailed steps. Contrary to the detailed computer program development steps discussed above, the Examiner incorrectly determines the claims merely perform genetic computer functions (Final Office Action dated October 20, 2016 ("Final Act.") 2–3, 10; the Examiner's Answer dated August 10, 2017 ("Ans.") 7, 13, 16), and are directed to arranging numbers or interpreting numbers, and constitute mathematical algorithms or mathematical computations (Final Act. 2, 10; Ans. 4–5, 8–12, 14).

Further, the Examiner's finding that the last step of claim 1 was known in the art (Ans. 6) does not show why the claims are not patent eligible under the *Alice* step-two analysis. *See Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC,* 827 F.3d 1341, 1350 (2016) ("The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art. As is the case here, an inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.").

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Instead of adhering to the conventional way of computer development, the claims provide an improved method of implementing changes in a computer program to fix errors. *See* claims 1–7; *DDR Holdings*, 773 F.3d at 1258–59. Therefore, similar to the claims of *DDR* and contrary to the Examiner's assertion (Final Act. 2–3, 10; Ans. 7, 13, 16), "[w]hen the limitations of [this invention] are taken together[], the claims recite an invention that is not merely the routine or conventional use of" general-purpose computers. *See* claims 1–7; *DDR Holdings*, 773 F.3d at 1259.

Finally, "[i]t is also clear that the claims at issue do not attempt to preempt every application of the idea of" fixing computer program errors. "Rather, they recite a specific way" based on the detailed steps discussed above. *DDR Holdings*, 773 F.3d at 1259. As a result, the claims include "additional features" that ensure the claims are "more than a drafting effort designed to monopolize the [abstract idea]." *Id.* (citing *Alice,* 134 S.Ct. at 2357). In short, "the claimed solution amounts to an inventive concept for resolving this particular" computer program development problem, rendering the claims patent eligible. *Id.*

Accordingly, we reverse the Examiner's rejection of claims 1–7 under 35 U.S.C. § 101.

DECISION

We reverse the Examiner's decision rejecting claims 1–7 under 35 U.S.C. § 101.

REVERSED

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