UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/477,905	06/03/2009	Satish Kumar Sallakonda	ORCL-097	8429

51121 7590 03/04/2019

IPHORIZONS PLLC
C/O Ms. Yashna Thappeta
196 Nicoll Street, Apt# 2,
New Haven, CT 06511

EXAMINER	
CRAWLEY, TALIA F	

ART UNIT	PAPER NUMBER
3687	

NOTIFICATION DATE	DELIVERY MODE
03/04/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

oracle@iphorizons.com
intercomm@iphorizons.com
lfnt2000@gmail.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SATISH KUMAR SALLAKONDA,
RAMBABU DOLA, VINAY BABU VEGUNTA,
JAYAVEL BHARATHI, and
RAVIKUMAR VENKATA MOOLAVEESLA

Appeal 2018-000767[1]
Application 12/477,905
Technology Center 3600

Before MURRIEL E. CRAWFORD, MICHAEL W. KIM, and PHILIP J. HOFFMANN, *Administrative Patent Judges*.

CRAWFORD, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal from the final rejection of claims 1, 4–9, 12–17, and 19–22, which constitute all the claims pending in this application.

---

[1] The Appellants identify Oracle International Corp. as the real party in interest. Appeal Br. 2.

Claims 2, 3, 10, 11, and 18 have been cancelled. We have jurisdiction to review the case under 35 U.S.C. §§ 134(a) and 6(b).

The invention relates generally to testing a data access tier of software services to confirm enforcement of business rules within the data access tier. Spec. ¶ 2.

Claim 1 is illustrative:

> 1. A computer implemented method facilitating a user to test whether desired business rules are enforced in an enterprise application implemented as a plurality of tiers, said enterprise application being designed to use data stored in a data storage, wherein said data storage contains a plurality of tables, with each table containing a corresponding set of columns, said plurality of tiers including a data access tier and a set of interface tiers, wherein said data access tier specifies, for said enterprise application, a plurality of attributes which are accessible from said set of interface tiers, wherein each attribute is defined to uniquely identify a corresponding column of one of said plurality of tables, wherein said set of interface tiers are provided access to said data in said data storage only through said plurality of attributes specified in said data access tier, wherein each of a plurality of business rules is specified in said data access tier and specifies a corresponding condition which is to be satisfied for permitting a change to a data element stored in said data storage, wherein conditions specified in said set of business rules contain at least some of said plurality of attributes, said method comprising:
>
> receiving an indication from a user that the enforcement of a set of business rules is sought to be tested, wherein said set of business rules is contained in said plurality of business rules;
>
> inspecting programmatically said data access tier to identify a set of attributes contained in said plurality of attributes specified in said data access tier, each of said set of attributes being specified in one of said set of business rules, wherein a first business rule of said set of business rules specifies a first condition containing a first attribute of said set of attributes, said

first attribute uniquely identifying a first column of one of said plurality of tables;

providing programmatically said set of attributes including said first attribute to said user to enable said user to create a set of test cases based on said set of attributes, wherein a first test case of said set of test cases is created by incorporating said first attribute, said first test case includes test data for testing said first business rule and an expected result,

wherein said test data is specified for storing in said first attribute, wherein said expected result indicates whether said first business rule is expected to operate to accept or reject said test data when said test data is sought to be stored in said first column;

receiving from said user, said set of test cases, including said first test case; and

executing programmatically said set of test cases to test whether said set of business rules are enforced in said enterprise application,

wherein execution of said first test case generates a validation result indicating whether or not said test data was stored in said first column,

wherein comparison of said validation result with said expected result indicates whether said first rule is enforced for said first test case,

wherein said receiving said indication, said inspecting , said providing, said receiving and said executing are performed by execution of a set of instructions by a processor.

The Examiner rejected claims 1, 4–9, 12–17, and 19–22 under 35 U.S.C. § 101 as directed to ineligible subject matter in the form of abstract ideas.

We REVERSE.

ANALYSIS

An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include

implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is "directed to." *See Alice*, 573 U.S. at 219 ("On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.,* the use of a third party to mitigate settlement risk."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk.").

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that "[a] claim drawn to subject matter otherwise

statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 176; *see also id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). Having said that, the Supreme Court also indicated that a claim "seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* (citing *Benson* and *Flook*); *see, e.g.*, *id.* at 187 ("It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.").

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (quotation marks omitted). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

In addition, the Federal Circuit has held that if a method can be performed by human thought alone, or by a human using pen and paper, it is merely an abstract idea and is not patent-eligible under § 101. *CyberSource*

Corp. v. Retail Decisions, Inc., 654 F.3d 1366, 1373 (Fed. Cir. 2011) ("[A] method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101.").

Claims involving data collection, analysis, and display are directed to an abstract idea. *Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (holding that "collecting information, analyzing it, and displaying certain results of the collection and analysis" are "a familiar class of claims 'directed to' a patent-ineligible concept"); *see also In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016). Claims that recite an improvement to a particular computer technology have been found patent eligible. *See, e.g., McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314–15 (Fed. Cir. 2016) (determining claims not abstract because they "focused on a specific asserted improvement in computer animation").

The Examiner finds the claims are directed to the abstract idea of "systems and methods of testing multi-tier applications to confirm enforcement of business rules specified in a data access tier of a multitier application." Final Act. 2. This corresponds generally to managing relationships between people, social activities, and human behavior, and is thus an abstract idea. *See* Manual of Patent Examining Procedure ("MPEP") § 2106.04(a)(2).

We are persuaded by the Appellants' argument, citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), that the claim is transformed into eligible subject matter because it is limited to a specific

technological environment, and is deeply rooted in computer technology. Appeal Br. 13.

Each independent claim is directed to the testing of middleware, or software that performs a function for the benefit of other software, such as an application program. The claimed data access tier performs data access control functions for application programs that need to access stored data. Spec. ¶¶ 4–6. The Specification describes business rules for a data access tier, which are rules for who has authority to access particular data stored in a computer system. *Id.* ¶¶ 7, 23. The claims test these rules, and thus the function of the data access tier, or data middleware. *Id.* ¶ 74. In order to test the middleware/data access tier, a computer is necessary, and the computer must be specifically programmed with the middleware being tested. *Id.* ¶ 138. The claimed data access tier middleware, which controls access to stored data, for application programs that call the middleware, thus transforms a general purpose computer into a particular machine. *See* MPEP § 2106.05(b). Analogous to the claims at issue in *DDR Holdings*, "these claims stand apart because they do not merely recite the performance of some business practice known from the pre-Internet world along with the requirement to perform it on the Internet. Instead, the claimed solution is necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks," here, middleware. The claims thus integrate the abstract idea into a practical application, which transforms the abstract idea into eligible subject matter.

Therefore, we do not sustain the rejection of claims under 35 U.S.C. § 101.

DECISION

We reverse the rejection of claims 1, 4–9, 12–17, and 19–22 under 35 U.S.C. § 101.

REVERSED