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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/870,420	08/27/2010	Gary Kenneth Ziegler	P3472US00	9771
54640	7590	06/10/2019	EXAMINER	
PERRY + CURRIER INC. 1300 YONGE STREET SUITE 500 TORONTO, ON M4T-1X3 CANADA			REFAI, RAMSEY	
			ART UNIT	PAPER NUMBER
			3668	
			NOTIFICATION DATE	DELIVERY MODE
			06/10/2019	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GARY KENNETH ZIEGLER and ANDREW FINALL

Appeal 2018-003188
Application 12/870,420¹
Technology Center 3600

Before JOSEPH L. DIXON, 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 rejection of claims 1–7, 9–19, 21, and 22, which are all the claims pending and rejected in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

¹ Appellants identify Ethor Media Ltd. as the real party in interest. App. Br. 3.

STATEMENT OF THE CASE

Introduction

The present invention relates to “to integrating diverse point of sale systems by providing a common data model.” Spec. ¶ 1. Claim 1 is exemplary:

1. A system for integrating a plurality of diverse point of sale systems, the system comprising:

a first computer processor in communication with the plurality of diverse point of sale systems, wherein each diverse point of sale system of the plurality diverse point of sale systems generates non-compatible point of sale data, the first computer processor configured to communicate with each of the plurality of diverse point of sale systems using a point of sale agent;

a second computer processor linked to the first computer processor, the second computer processor configured to operate an order manager; and

a memory storage unit for storing a point of sale database, wherein the point of sale database provides a common data model configured to be recognized by the order manager, the common data model including fields corresponding to at least one of a point of sale system identifier, pricing, and promotions,

wherein the point of sale agent receives the non-compatible point of sale data from each of the plurality of diverse point of sale systems and the order manager, the point of sale agent further configured to map the point of sale data to the common data model.

References and Rejections²

Claims 1–7, 9–19, 21, and 22 are rejected under 35 U.S.C. § 101 because they are directed to patent-ineligible subject matter. Final Act. 11–12.

Claims 1–7, 9–19, 21, and 22 are rejected under pre-AIA 35 U.S.C. § 112, first paragraph, as failing to comply with the written-description requirement. Final Act. 12–14.

Claims 1–3, 9–12, 17–19, 21, and 22 are rejected under pre-AIA 35 U.S.C. § 102 as being anticipated by Duvall (US 2003/0083944 A1, published May 1, 2003). Final Act. 14–16.

Claims 4–7 and 13–16 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over the collective teachings of Duvall and Kramer (US 2004/0162778 A1, published Aug. 19, 2004). Final Act. 16–17.

ANALYSIS

35 U.S.C. § 101

We have reviewed the Examiner’s rejection in light of Appellants’ contentions and the evidence of record. We concur with Appellants’ contention that the Examiner erred in this case.

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

² Throughout this opinion, we refer to the (1) Final Office Action dated Dec. 23, 2015 (“Final Act.”); (2) Appeal Brief dated Jan. 23, 2017 (“App. Br.”); and (3) Examiner’s Answer dated April 12, 2017 (“Ans.”).

obtain a patent therefor, subject to the conditions and requirements of this title.” 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. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (internal quotation marks and citation omitted).

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, 67 (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 187; *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 (citation 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.*

The PTO recently published revised guidance on the application of § 101. USPTO, 2019 REVISED PATENT SUBJECT MATTER ELIGIBILITY GUIDANCE, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Guidance”). Under the Guidance, we first look to whether the 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 1); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MANUAL OF PATENT EXAMINING PROCEDURE (“MPEP”) §§ 2106.05(a)–(c), (e)–(h)) (9th ed., Rev. 08.2017, 2018) (Step 2A, Prong 2).

Only if a claim (1) recites a judicial exception and (2) 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. (Step 2B.)

See Guidance, 84 Fed. Reg. at 54–56.

Even if each of independent claims 1 and 10 recites an abstract idea (such as sales activities), the Federal Circuit explains the “directed to” inquiry is not simply asking whether the claims involve a patent-ineligible concept:

The “directed to” inquiry . . . cannot simply ask whether the claims *involve* a patent-ineligible concept, because essentially every routinely patent-eligible claim involving physical products and actions *involves* a law of nature and/or natural phenomenon—after all, they take place in the physical world. *See Mayo*, 132 S. Ct. at 1293 (“For all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural

phenomena, or abstract ideas.”) Rather, the “directed to” inquiry applies a stage-one filter to claims, considered in light of the specification, based on whether “their character as a whole is directed to excluded subject matter.”

Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335 (Fed. Cir. 2016); *see also Diehr*, 450 U.S. at 188 (“In determining the eligibility of respondents’ claimed process for patent protection under § 101, their claims must be considered as a whole.”); *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016) (the question is whether the claims as a whole “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”).

Therefore, we proceed to Step 2A, Prong 2 of the Guidance to determine whether additional elements of the claims integrate the sales activities into a practical application. Such additional elements may reflect an improvement to a technology or technical field. *See* Guidance, 84 Fed. Reg. at 55. We determine that additional elements of independent claim 1 integrate the abstract idea into a practical application, as the additional elements (“integrating a plurality of diverse . . . systems,” “a first computer processor in communication with the plurality of diverse . . . systems, wherein each diverse . . . system of the plurality diverse . . . systems generates non-compatible . . . data, the first computer processor configured to communicate with each of the plurality of diverse . . . systems using a[n] . . . agent,” “a second computer processor linked to the first computer processor, the second computer processor configured to operate a[] . . . manager,” and “a memory storage unit for storing a . . . database, wherein the . . . database provides a common data model configured to be recognized

by the . . . manager, the common data model including fields corresponding to at least one of a . . . system identifier, . . . wherein the . . . agent receives the non-compatible . . . data from each of the plurality of diverse . . . systems and the . . . manager, the . . . agent further configured to map the . . . data to the common data model”) reflect a technology improvement of integrating diverse systems, so that non-compatible data from diverse systems are mapped to a common data model for centralized access. *See* claim 1; *see also DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014) (holding 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”).

Similarly, we determine that additional elements of independent claim 10 integrate the abstract idea into a practical application, as the additional elements (“integrating a plurality of diverse . . . systems,” “mapping non-compatible . . . data communicated by each diverse . . . system of the plurality of diverse . . . systems to a common data model configured to be recognized by a[] . . . manager, the common data model including fields corresponding to at least one of a . . . system identifier . . . ,” and “communicating, using one or more . . . agents, the . . . data between each diverse . . . system of the plurality diverse . . . systems and the . . . manager in accordance with the common data model”) reflect a technology improvement of integrating diverse systems, so that non-compatible data from diverse systems are mapped to a common data model for centralized access. *See* claim 10; *see also DDR Holdings*, 773 F.3d at 1257.

Our determinations are supported by the Specification, which describes the prior-art problem of providing centralized access to non-

compatible data from diverse systems, and the need to integrate the diverse systems by mapping non-compatible data to a common data model, in order to allow centralized access to such data:

The present invention relates more specifically to integrating diverse point of sale systems by providing a common data model.

Spec. 1:4–6.

Significant technological challenges have impacted the retail industry as a result of a fractured point of sale system infrastructure. Franchises, and even franchisees within a franchise, commonly use diverse point of sale systems. The challenge occurs when a franchise as a whole tries to do something as a single unit, such as online ordering. A particular franchise might, for example, have five diverse point of sale systems being used throughout their chain. In order to provide a unified online ordering system that works with all of their stores, they must implement five different custom integrations with five diverse POS systems, none of which “talk” to each other or are integrated with each other in any way. As a result, retailers desiring to offer online retailing cannot leverage point of sale data that is already available to them.

Several solutions for providing an integrated point of sale system have been proposed, however none of them provide integration of diverse point of sale systems.

Spec. 1:8–18.

None of [the prior-art patent applications] provide any means to integrate diverse point of sale systems for centralizing access to point of sale data. Furthermore none of these patent applications provide any means to leverage point of sale data from the point of sale systems for online promotion.

Therefore, what is required is a means by which to integrate diverse point of sale systems. What is also required is a means to leverage point of sale data from the point of sale systems for online promotion.

Spec. 2:23–30.

The present invention provides a system, method and computer program for integrating diverse point of sale systems. The present invention is operable to communicate with diverse point of sale systems to integrate point of sale data.

Spec. 4:18–22.

Because the additional elements of claims 1 and 10 integrate the sales activities into a practical application, we determine each of claims 1 and 10 is not directed to an abstract idea. *See* Guidance, Step 2A, Prong 2. For similar reasons, each of claims 2–7, 9, 11–19, 21, and 22 integrates the sales activities into a practical application, and is not directed to an abstract idea.

Therefore, we reverse the rejection of claims 1–7, 9–19, 21, and 22 under 35 U.S.C. § 101.

Pre-AIA 35 U.S.C. § 112, First Paragraph

The Examiner asserts claims 1–7, 9–19, 21, and 22 fail to comply with the written-description requirement (Final Act. 12–13; Ans. 5–7) with respect to the following claim limitations:

a first computer processor in communication with the plurality of diverse point of sale systems, wherein each diverse point of sale system of the plurality diverse point of sale systems generates non-compatible point of sale data, the first computer processor configured to communicate with each of the plurality of diverse point of sale systems using a point of sale agent;

a second computer processor linked to the first computer processor, the second computer processor configured to operate an order manager; and

. . . wherein the point of sale database provides a common data model configured to be recognized by the order

manager, the common data model including fields corresponding to at least one of a point of sale system identifier, pricing, and promotions,

wherein the point of sale agent receives the non-compatible point of sale data from each of the plurality of diverse point of sale systems and the order manager, the point of sale agent further configured to map the point of sale data to the common data model,

as recited in claim 1;

third computer processor configured to operate a campaign manager, the third computer processor linked to the second computer processor,

as recited in claim 4;

compare the non-compatible point of sale data from each diverse point of sale system of the plurality of diverse point of sale systems with the point of sale database,

as recited in claim 9;

wherein the first processor is configured to operate the point of sale agent,

as recited in claim 21; and

wherein at least one diverse point of sale system of the plurality of diverse point of sale systems is configured to operate the point of sale agent,

as recited in claim 22.

We disagree. To satisfy the written-description requirement, the disclosure must reasonably convey to skilled artisans that Appellants possessed the claimed invention as of the filing date. *See Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Specifically, the description must “clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed” and

the test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill

in the art. Based on that inquiry, the specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed.

. . . . [T]he level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology. For generic claims, we have set forth a number of factors for evaluating the adequacy of the disclosure, including “the existing knowledge in the particular field, the extent and content of the prior art, the maturity of the science or technology, [and] the predictability of the aspect at issue.”

Id. (internal quotations and citations omitted).

[T]he description requirement does not demand any particular form of disclosure, or that the specification recite the claimed invention *in haec verba*

Id. at 1352 (citations omitted).

Here, we agree with Appellants that the Specification reasonably conveys to skilled artisans that as of the filing date, Appellants possessed the claimed invention with respect to the above claim limitations. *See Ariad Pharms.*, 598 F.3d at 1351; App. Br. 11–15. In particular, the Specification does not need to recite the disputed limitations *in haec verba*. *See Ariad Pharms.*, 598 F.3d at 1352. We agree with Appellants that the cite excerpts of the Specification describe the invention with respect to the disputed limitations. *See App. Br.* 11–14. Therefore, the “specification . . . describe[s] an invention understandable to th[e] skilled artisan and show[s] that the inventor actually invented the invention claimed” with respect to the above claim limitations. *Ariad Pharms.*, 598 F.3d at 1351.

Accordingly, we reverse the Examiner’s rejection of claims 1–7, 9, 21, and 22 under pre-AIA 35 U.S.C. § 112, first paragraph.

Claim 10–19 recite similar limitations, and the Examiner rejects those claims for similar reasons. *See* Final Act. 14. Therefore, for similar reasons, we reverse the Examiner’s rejection of claims 10–19 under pre-AIA 35 U.S.C. § 112, first paragraph.

35 U.S.C. § 102

We have reviewed the Examiner’s anticipation rejection in light of Appellants’ contentions and the evidence of record. We concur with Appellants’ contention that the Examiner erred in finding the cited portions of Duvall disclose “a first computer processor in communication with *the plurality of diverse point of sale systems*, wherein each diverse point of sale system of the plurality diverse point of sale systems *generates non-compatible point of sale data*,” as recited in independent claim 1 (emphases added). *See* App. Br. 15–16.

The Examiner cites Duvall’s paragraphs 7–9 and Figures 1–2 for disclosing the above italicized claim limitations. *See* Final Act. 14–15; Ans. 7–8. We have reviewed the cited Duvall portions, and they do not describe “communication with *the plurality of diverse point of sale systems*, wherein each diverse point of sale system of the plurality diverse point of sale systems *generates non-compatible point of sale data*,” as required by claim 1 (emphases added). In particular, paragraphs 13 and 14 of Duvall describe a single point of sale system in Figures 1 and 2—not “the plurality of diverse point of sale systems.” *See* App. Br. 16. Further, the Examiner has not adequately explained why Duvall’s single point of sale system generates *non-compatible point of sale data*, as required by claim 1.

Because the Examiner fails to provide sufficient evidence or explanation to support the anticipation rejection, we are constrained by the record to reverse Examiner's rejection of claim 1.

Independent claim 10 recites claim limitations that are substantively similar to the italicized limitations of claim 1. *See* claim 10. The Examiner applies the same findings and conclusions to both claims 1 and 10. *See* Final Act. 15. Therefore, for similar reasons, we reverse the Examiner's rejection of independent claim 10.

We also reverse the Examiner's anticipation rejection of corresponding dependent claims 2–3, 9, 11, 12, 17–19, 21, and 22.

35 U.S.C. § 103

The Examiner cites an additional reference for the obviousness rejection of dependent claims 4–7 and 13–16. The Examiner relies on Duvall in the same manner discussed above in the context of claim 1, and does not rely on the additional reference in any manner that remedies the deficiencies of the underlying anticipation rejection. *See* Final Act. 16–17.

Accordingly, we reverse the Examiner's obviousness rejection of claims 4–7 and 13–16.

DECISION

We reverse the Examiner's decision rejecting claims 1–7, 9–19, 21, and 22 under 35 U.S.C. § 101.

We reverse the Examiner's decision rejecting claims 1–7, 9–19, 21, and 22 under pre-AIA 35 U.S.C. § 112, first paragraph.

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We reverse the Examiner's decision rejecting claims 1–3, 9–12, 17–19, 21, and 22 under pre-AIA 35 U.S.C. § 102.

We reverse the Examiner's decision rejecting claims 4–7 and 13–16 under pre-AIA 35 U.S.C. § 103.

REVERSED