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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/446,357	07/30/2014	Ole-Petter Skaaksrud	30006.0012US01	1249
44305	7590	12/26/2019	EXAMINER	
WITHERS & KEYS, LLC P. O. BOX 2049 MCDONOUGH, GA 30253			JOSEPH, TONYA S	
			ART UNIT	PAPER NUMBER
			3628	
			MAIL DATE	DELIVERY MODE
			12/26/2019	PAPER

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* OLE-PETTER SKAAKSRUD, TERENCE HOLLAHAN, and  
STEVEN BENTON

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Appeal 2018-009116  
Application 14/446,357  
Technology Center 3600

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Before MICHAEL R. ZECHER, JUSTIN BUSCH, and  
JASON J. CHUNG, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals the Final Rejection of claims 1–11 and 31–49.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

INVENTION

The invention generally relates to improved asset identification, location services, and node management using an adaptive, context-aware

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<sup>1</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. According to Appellant, FedEx Corporate Services, Inc. is the real party in interest. Br. 3.

<sup>2</sup> According to the claims filed with a Response to a Non-Final Action on October 4, 2016, claims 12–30 are cancelled.

wireless node network. Spec. ¶ 2. Claim 1 is illustrative of the invention and is reproduced below:

1. A method for managing a shipment of an item using a wireless node network having at least one ID node, a plurality of master nodes, and a backend management server distinct from the ID node and the master nodes, the method comprising:

*transmitting shipping information to the backend management server to cause the backend management server to register the ID node and the item to be shipped prior to entering a shipment path for the item predicted by the backend management server;*

*associating, by a first of the master nodes, the ID node to the first master node to generate first association data on the first master node reflecting a pairing of the ID node and the first master node authorized by the backend management server, wherein the first master node is related to the shipment path for the item predicted by the backend management server;*

*updating, by the first master node, the backend management server with the generated first association data to reflect associating the ID node and the first master node;*

*associating, by a second of the master nodes, the ID node and the second master node to generate second association data on the second master node as the ID node transits the shipment path for the item predicted by the backend management server and as the ID node approaches the second master node, the second association data reflecting a pairing of the ID node and the second master node authorized by the backend management server, wherein the second master node is related to the shipment path for the item predicted by the backend management server as the ID node transits the shipment path; and*

*updating, by the second master node, the backend management server with the generated second association data to reflect associating the ID node and the second master node as the ID node continues to transit the shipment path.*

Appeal Br. 52 (Claims Appendix) (emphases added).

REJECTION<sup>3,4,5,6</sup>

Claims 1–11 and 31–49 stand rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Final Act. 3–5.<sup>7</sup>

ANALYSIS

*I. Claims 1–11 and 31–49 Rejected Under 35 U.S.C. § 101*

*A. Legal Principles*

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

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<sup>3</sup> The rejections under 35 U.S.C. § 103 have been withdrawn. Ans. 3–4.

<sup>4</sup> Claim 1 recites “the item to be shipped prior to entering a shipment path for *the item predicted*” (emphasis added). It is unclear whether the adjective “predicted” is modifying the term “item” or the phrase “a shipment path.” In the event of further prosecution, the Examiner may wish to evaluate whether claims 1–11 meet the 35 U.S.C. § 112(b) requirements for definiteness. *See Ex parte Miyazaki*, 89 USPQ2d 1207, 1211–1212 (BPAI 2008) (precedential) (“[I]f a claim is amenable to two or more plausible claim constructions, the USPTO is justified in requiring the applicant to more precisely define the metes and bounds of the claimed invention by holding the claim unpatentable under 35 U.S.C. § 112, second paragraph, as indefinite.”).

<sup>5</sup> In the event of further prosecution, the Examiner should evaluate the limitation “the item to be shipped prior to entering a shipment path for *the item predicted*” (emphasis added) recited in claim 1 in light of 35 U.S.C. § 112(b) as lacking antecedent basis.

<sup>6</sup> If the adjective “predicted” is modifying the term “item” as discussed *supra* in n.4, then the Examiner should evaluate this claim 1 limitation in light of 35 U.S.C. § 112(a) as lacking written description. Appellant refers to paragraphs 488, 495, and 502 as supporting the limitation “item predicted.” Br. 5. However, these paragraphs do not appear to support the interpretation that the adjective “predicted” is modifying the term “item.”

<sup>7</sup> All references to the Final Action refer to the Final Action mailed on January 12, 2017.

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. (15 How.) 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 192 (“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.*

The U.S. Patent and Trademark Office (“USPTO”) published revised guidance on the application of § 101. USPTO’s January 7, 2019 Memorandum, 2019 Revised Patent Subject Matter Eligibility Guidance (“Memorandum”). Under that 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); 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)).

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 are 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.

*See* Memorandum.

*B. The Examiner’s Conclusions and Appellant’s Arguments*

The Examiner concludes the present claims recite certain methods of organizing human activity. Final Act. 4. The Examiner also determines the present claims do not amount to significantly more than an abstract idea itself because the abstract idea is implemented on generic computer components that are well-understood, routine, and conventional. *Id.* at 5.

Appellant argues the Examiner’s analysis is inconsistent with the July 2015 Update from the USPTO on Subject Matter Eligibility (“July 2015 Update”) and the USPTO May 4, 2016 Memorandum entitled “Formulating

a Subject Matter Eligibility Rejection and Evaluating the Appellants' Response to a Subject Matter Eligibility Rejection" ("May 2016 Memo") because the Examiner does not analyze each claim on its own and, therefore, does not establish a prima facie case of patent-ineligibility. Br. 32–34. Appellant argues the present claims do not recite certain methods of organizing human activity because they recite a technical solution for managing a shipment of an item that requires interactive actions to be performed by a multitude of four interacting devices that goes beyond generic computer structures. *Id.* at 34–38, 41–42. Appellant argues claims 1, 3, 8, 33, 38, 46, and 49 do not preempt any abstract idea. *Id.* at 36–38, 46–47. Appellant argues that, because there is no prior art rejection remaining for our consideration, this is evidence that claims 3, 8, 33, 38, 46, and 49 recite features that add further limitations that transform the limitations of claims 1, 31, and 44, which are incorporated by virtue of dependency, into something more than just the alleged abstract idea. *Id.* at 46–47. Appellant argues the combination of elements recited in the present claims are not simply a server and the Examiner's finding that the abstract idea is implemented on generic components that are well-understood, routine, and conventional is devoid of analysis relative to the actual limitations recited. *Id.* at 40–41. We disagree with Appellant.<sup>8</sup>

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<sup>8</sup> We focus only on the Examiner's conclusion that the present claims recite certain methods of organizing human activity (Final Act. 4) and the Examiner's determination that the present claims do not amount to significantly more than an abstract idea itself because the abstract idea is implemented on generic components that are well-understood, routine, and conventional (*id.* at 5). Therefore, we need not address Appellant's arguments pertaining to the Examiner's other conclusions (i.e., "associating

C. Discussion

1. Step 2A, Prong 1

The emphasized portions of claim 1, reproduced above (*see supra* at 2), recite commercial interactions including business relations because they recite managing shipment of an item; these emphasized portions recite a form of customer service that allows customers to build or maintain a business relationship with a company by tracking shipments from the company. According to the Memorandum, commercial interactions including business relations fall into the category of certain methods of organizing human activity. *See* Memorandum. Moreover, those certain methods of organizing human activity are a type of an abstract idea. *See id.*

We disagree with Appellant’s argument that the Examiner’s analysis is inconsistent with the July 2015 Update and the May 2016 Memo because the Examiner does not analyze each claim on its own and, therefore, does not establish a *prima facie* case of patent-ineligibility. Br. 32–34. Patent eligibility under 35 U.S.C. § 101 is a question of law that is reviewable *de novo*. *See Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333 (Fed. Cir. 2012). We are aware of no controlling authority, and Applicant does not direct us to any such authority in its Brief, that requires the Examiner to provide factual evidence under step one of the *Alice* framework to support a determination that a claim is directed to an abstract idea. The Federal Circuit has repeatedly noted that “the *prima facie* case is merely a procedural device that enables an appropriate shift of the burden of production.” *Hyatt v. Dudas*, 492 F.3d 1365, 1369 (Fed. Cir. 2007) (citing *In re Oetiker*, 977 F.2d 1443,

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ID nodes with master nodes” and “using categories to organize, store, and transmit information”) (*see e.g.*, Br. 34, 36, 38, 39) to reach our Decision.

1445 (Fed. Cir. 1992)). The Examiner satisfies the burden of establishing a prima facie case under 35 U.S.C. § 132 by setting forth a §101 rejection in a sufficiently articulate and informative manner. *In re Jung*, 637 F.3d 1356, 1363 (Fed. Cir. 2011). If the Examiner “adequately explain[s] the shortcomings . . . the burden shifts to the applicant to rebut the prima facie case with evidence and/or argument.” *Hyatt*, 492 F.3d at 1370. The Final Office Action adequately explains the § 101 rejection by concluding the present claims recite certain methods of organizing human activity. Final Act. 4. Also, the Final Office Action adequately explains the finding that present claims do not amount to significantly more than an abstract idea itself because the abstract idea is implemented on generic components that are well-understood, routine, and conventional. *Id.* at 5. In our view, the Examiner’s statements satisfy § 132(a) because they apply the *Alice* analytical framework and apprise Appellant of the reasons for the § 101 rejection under that framework. Appellant has not responded by alleging a failure to understand the § 101 rejection. Indeed, Appellant appears to understand the Examiner’s § 101 rejection because Appellant filed twenty pages of arguments that argue the specifics of that rejection. Br. 31–50.

Because the present claims recite commercial interactions, which fall into the category of certain methods of organizing human activity (i.e., an abstract idea), we proceed to prong 2.

## 2. *Step 2A, Prong 2*

The present claims do not integrate the abstract idea into a practical application because they do not impose any meaningful limits on practicing the abstract idea. In particular, we disagree with Appellant’s argument that the present claims do not recite certain methods of organizing human

activity because they recite a technical solution for managing a shipment of an item that requires interactive actions to be performed by a multitude of (i.e., four) interacting devices that goes beyond generic computer structure. Br. 34.

The alleged technical solution is a solution for managing a shipment of an item that requires interactive actions to be performed by a multitude of interacting devices. To resolve this issue, we turn to the USPTO October 2019 Patent Eligibility Guidance Update (“Update”). The Update states

[d]uring examination, the examiner should analyze the “improvements” consideration by evaluating the specification and the claims to ensure that a technical explanation of the asserted improvement is present in the specification, and that the claim reflects the asserted improvement. Generally, examiners are not expected to make a qualitative judgment on the merits of the asserted improvement. *If the examiner concludes the disclosed invention does not improve technology, the burden shifts to applicant to provide persuasive arguments supported by any necessary evidence to demonstrate that one of ordinary skill in the art would understand that the disclosed invention improves technology.* Any such evidence submitted under 37 C.F.R. § 1.132 must establish what the specification would convey to one of ordinary skill in the art and cannot be used to supplement the specification. For example, in response to a rejection under 35 U.S.C. § 101, an applicant could submit a declaration under § 1.132 providing testimony on how one of ordinary skill in the art would interpret the disclosed invention as improving technology and the underlying factual basis for that conclusion.

Update, 13 (emphasis added).

In this case, the Examiner concludes the invention does not improve technology. *See* Final Act. 4–5. In response, Appellant presents an argument that is not supported by evidence and is, therefore, merely attorney argument without identifying evidentiary support, such as disclosures in the

Specification. Moreover, the present claims recite an abstract idea as discussed *supra*, in § I.C.1. or, at best, an improvement to an abstract idea—not a technological improvement. The Specification indicates the additional elements (i.e., “server” and “node”) recited in the present claims are merely tools used to implement the abstract idea. Spec. ¶¶ 20–23, 143–163, 206–223, 225–264. Moreover, the additional elements individually and in combination, do not integrate the judicial exception into a practical application.

Appellant’s argument that claims 1, 3, 8, 33, 38, 46, and 49 do not preempt any abstract idea does not persuade us that the claims are eligible. Br. 36–38, 46–47. Although preemption may denote patent ineligibility, its absence does not demonstrate patent eligibility. *See FairWarning, IP, LLC v. Iatric Sys., Inc.*, 839 F.3d at 1098. For claims covering a patent-ineligible concept, preemption concerns “are fully addressed and made moot” by an analysis under the *Mayo/Alice* framework. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

We disagree with Appellant’s argument that, because there is no prior art rejection remaining for our consideration, this is evidence that claims 3, 8, 33, 38, 46, and 49 recite features that add further limitations that transform the limitation of claims 1, 31, and 44, which are incorporated by virtue of dependency, into something more than just the alleged abstract idea. Br. 46–47. Appellant improperly conflates the requirements for eligible subject matter (§ 101) with the independent requirements of novelty (§ 102) and non-obviousness (§ 103). “The ‘novelty’ of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101

categories of possibly patentable subject matter.” *Diehr*, 450 U.S. at 188–89; *see also Genetic Techs.*, 818 F.3d at 1376 (stating that, “under the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility”).

Appellant does not make any other arguments pertaining to step 2A, prong 2. Because the present claims recite an abstract idea that is not integrated into a practical application, we proceed to Step 2B.

### 3. *Step 2B*

We agree with the Examiner’s determination that the abstract idea is implemented on generic computer components that are well-understood, routine, and conventional. Final Act. 5. The Specification supports the Examiner’s determination in this regard because it explains that “server” and “node” are generic components. Spec. ¶¶ 20–23, 143–163, 206–223, 225–264. Moreover, the additional elements recited in the present claims, taken individually and in combination, do not result in the claims, as a whole, amounting to significantly more than the judicial exception. Appellant’s Specification indicates these elements were well-understood, routine, and conventional components because it describes them at a high level of generality and in a manner that indicates that they are sufficiently well-known. *Id.*

Appellant does not argue claims 2, 4–7, 9–11, 31, 32, 34–37, 39–45, 47, and 48 separately with particularity, but asserts the § 101 rejection of those claims should be withdrawn for at least the same reasons as argued for independent claim 1. *See* Br. 31–50. Based on our review of the dependent claims, these claims do not recite any additional features that would

transform the abstract idea embodied in claims 1, 31, and 44 into an inventive concept. Accordingly, we sustain the Examiner's rejection of: (1) independent claims 1, 31, and 44; and (2) dependent claims 2–11, 32–43, and 45–49 under 35 U.S.C. § 101.

We have only considered those arguments that Appellant actually raised in the Brief. Arguments Appellant could have made, but chose not to make, in the Brief have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

#### CONCLUSION

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–11, 31–49	101	Eligibility	1–11, 31–49	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 1.136(a)(1)(iv).

**AFFIRMED**