UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte VLADIMIR POGREBINSKY, SATA BUSAYARAT, and
JAMEEL A. GBAJABIAMILA

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Appeal 2018-007944
Application 14/455,791
Technology Center 3600

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Before JOHN A. JEFFERY, DENISE M. POTHIER, and
JUSTIN BUSCH, *Administrative Patent Judges*.

POTHIER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant[1,2] appeals under 35 U.S.C. § 134(a) from the Examiner's

decision to reject claims 21, 22, 24–29, 31–36, and 38–40. Appeal Br. 1.

Claims 1–20, 23, 30, and 37 have been canceled. Final Act. 2; Appeal Br.

26, 28, 30 (Claims App'x).

We AFFIRM.

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[1] Throughout this opinion, we refer to the Final Action (Final Act.) mailed
October 31, 2017; the Appeal Brief (Appeal Br.) filed May 4, 2018; the
Examiner's Answer (Ans.) mailed June 8, 2018; and the Reply Brief (Reply
Br.) filed July 30, 2018.
[2] We use the word "Appellant" to refer to "applicant" as defined in 37
C.F.R. § 1.42. Appellant identifies the real party in interest as Microsoft
Technology Licensing, LLC. Appeal Br. 1.

Invention

Appellant's invention relates to a subscription management service that allows subscribers to create their own organizational plans defining how services are offered to sub-organizations. *Id.* ¶¶ 6, 34–35. In one embodiment, a provider (e.g., 301), such as a datacenter or cloud service administrator, subscribes to a zero-day plan that provides an initial set of cloud services and resources. *Id.* ¶¶ 24, 42, Fig. 3. The provider may define reseller plans that resellers (e.g., 302) may subscribe to and use. *Id.* ¶¶ 24, 26, Fig. 3. The reseller plans provide various service configurations, resources, security, authentication, and fee structures available from the provider. *Id.* ¶ 24. Each reseller, in turn, may define tenant plans offered to tenants (e.g., 303), which are end users, to access desired services of the provider. *Id.* ¶¶ 26–27, Fig. 3. Similar to the reseller plans, the tenant plans provide various service configurations, resources, security, authentication, and fee structures. *Id.* ¶ 26. Resellers may track each tenant's use of the desired services and resources for billing. *Id.* ¶ 26.

Independent claim 28 exemplifies the claims at issue and reads as follows:

> 28. A method implemented by a computer with a processor in a datacenter, the method comprising:
> registering an organizational subscription with a datacenter provider of the datacenter, the organization subscription allowing an organization to consume a set of cloud services provided by the datacenter;
> installing applications in the datacenter permitted by the organizational subscription, execution of the installed applications in the datacenter providing additional cloud services accessible only to tenants of the organization;
> in response to input from an administrator of the organization, generating data representing multiple customized

> organization plans with corresponding organizational quotas, the created organization plans individually comprising a subset of the cloud services provided by the datacenter and the additional cloud services consumable by the tenants of the organization according to the corresponding organizational quotas, wherein one or more of the additional cloud services is included in one or more of the organizational plans;
>
> receiving data representing subscription requests from individual tenants of the organization to subscribe to one of the created organizational plans; and
>
> in response to receiving the subscription requests, registering tenant subscriptions that allow the individual tenants to access the corresponding subsets of the cloud services included in the organizational plans; and
>
> tracking and limiting tenant usage of the subsets of the cloud services corresponding to the tenant subscriptions the individual tenants subscribed to, thereby allowing the individual tenants of the organization to utilize one or more of the cloud services provided by the datacenter or the additional cloud services according to the customized organizational plans.

Appeal Br. 27–28 (Claims App'x).

THE SIGNAL *PER SE* REJECTION

Claim 21 recites a computing system with a computer-readable storage media having instructions that, when executed by one or more processors, cause the processor(s) to perform steps similar to those in claim 28. Appeal Br. 25–26 (Claims App'x). Independent claim 21 is rejected under 35 U.S.C. § 101 as covering a signal *per se*. Final Act. 5 (citing the Manual of Patent Examining Procedure (MPEP) § 2111.01 and *In re Nuijten*, 500 F.3d 1346, 1356–57 (Fed. Cir. 2007)). Appellant does not contest this rejection and authorizes the Examiner "to insert 'non-transitory'

prior to 'computer-readable storage media'" recited in claim 21. *See* Appeal Br. 24. For these reasons, we summarily sustain this rejection. *See* MPEP § 1205.02; *see also Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential) ("If an appellant fails to present arguments on a particular issue—or more broadly, on a particular rejection—the Board will not, as a general matter, unilaterally review those uncontested aspects of the rejection.").

THE PATENT-ELIGIBILITY REJECTION

Claims 21, 22, 24–29, 31–36, and 38–40 are rejected under 35 U.S.C. § 101 as being directed to a judicial exception without significantly more. Final Act. 2–4. The Examiner determined that the claims are directed to an abstract idea, namely managing organizational subscription plans, which is a fundamental economic practice. *See id.* at 2–3; Ans. 4. The Examiner added that the claims do not include additional elements or limitations individually or in combination that are sufficient to amount to significantly more than the judicial exception. Final Act. 3–4; *see* Ans. 3–6. Based on these determinations, the Examiner concluded that the claims are ineligible under § 101. Final Act. 2–4.

Appellant argues that the claimed invention should not be viewed merely as a fundamental economic practice because the rejection "unreasonably abstracted features . . . and misidentified similar inventive concepts that the court[s] have deemed to be abstract ideas." Appeal Br. 12; see *id.* at 11–13; Reply Br. 1–3. According to Appellant, the claims recite elements directed to specific improvements in the capabilities of a datacenter providing cloud computing services. *Id.* at 14–15 (citing Spec. ¶¶ 6, 29–36).

ISSUE

Under § 101, has the Examiner erred in rejecting the claims by determining that the claims are directed to judicially excepted, patent ineligible subject matter?

PRINCIPLES OF LAW

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. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (brackets in original) (citing *Diamond v. Diehr, 450* U.S. 175, 185 (1981)).

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*. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 217–18 (2014) (citing *Mayo*, 566 U.S. at 75–77). 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 of rubber products" (*Diehr*, 450 U.S. at 193); "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 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."). That said, 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 January 2019, the USPTO published revised guidance on the application of § 101. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Revised Guidance"). 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 activities such as a fundamental economic practice, or mental processes) (Revised Guidance, 84 Fed. Reg. at 52–54) ("Revised Step 2A - Prong 1"); and

> (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h)) (Revised Guidance, 84 Fed. Reg. at 53–55) ("Revised 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, and conventional in the field (*see* MPEP § 2106.05(d)); or

> (4) simply appends well-understood, routine, and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Revised Guidance, 84 Fed. Reg. at 56 ("Step 2B").

ANALYSIS

CLAIMS 21, 22, 24, 28, 29, 31, 35, 36, AND 38

Appellant argues claims 21, 22, 24, 28, 29, 31, 35, 36, and 38 as a group. *See* Appeal Br. 12–16.[3] We select independent claim 28 as representative. *See* 37 C.F.R. § 41.37(c)(1)(iv). Claim 28's subject matter falls within one of a statutory category of patentable subject matter—a process. *See* Revised Guidance, 84 Fed. Reg. at 53–54.

Alice Step One

Despite falling within a statutory category under § 101, we determine whether claim 28 as a whole is directed to a judicial exception, namely an abstract idea. *See Alice*, 573 U.S. at 217. To this end, we determine (1) whether claim 28 recites a judicial exception (Revised Step 2A - Prong 1) and, if so, (2) whether the identified judicial exception is integrated into a practical application (Revised Step 2A – Prong 2). *See* Revised Guidance, 84 Fed. Reg. at 52–55. If both elements are satisfied, the claim is directed to a judicial exception under the first step of the *Alice/Mayo* test. *See id.*

Revised Step 2A - Prong 1

In Revised Step 2A - Prong 1, we identify the claim's specific limitations that recite a judicial exception, and determine whether the identified limitations fall within certain subject matter groupings, namely (a) mathematical concepts (mathematical relationships, formulas, and

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[3] Appellant separately argues each of independent claims 28 and 35. Appeal Br. 22–24. However, Appellant states these claims are eligible "[f]or at least the reasons discussed above with respect to claim 21." *Id.*

calculations); (b) certain methods of organizing human activity (e.g.,
fundamental economic practices, commercial or legal interactions, and
managing personal behavior or interactions between people); or (c) mental
processes (e.g., concepts performed in the human mind including an
observation, evaluation, judgment, or opinion). *See* Revised Guidance, 84
Fed. Reg. at 52.

We agree with the Examiner (*see* Final Act. 2) that claim 28 recites at
least one judicial exception. Claim 28 recites the following steps:
(A) "registering an organizational subscription with a . . . provider . . . , the
organization subscription allowing an organization to consume a set of . . .
services provided by the datacenter," (B) "installing applications in the
datacenter permitted by the organizational subscription, execution of the
installed applications in the datacenter providing additional cloud services
accessible only to tenants of the organization," (C)

> in response to input from an administrator of the organization,
> generating data representing multiple customized organization
> plans with corresponding organizational quotas, the created
> organization plans individually comprising a subset of the . . .
> services provided by the datacenter and the additional . . .
> services consumable by the tenants of the organization
> according to the corresponding organizational quotas, wherein
> one or more of the additional . . . services is included in one or
> more of the organizational plans;

(D) "receiving data representing subscription requests from individual
tenants of the organization to subscribe to one of the created organizational
plans," (E) "in response to receiving the subscription requests, registering
tenant subscriptions that allow the individual tenants to access the

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corresponding subsets of the . . . services included in the organizational

plans," (F)

> tracking and limiting tenant usage of the subsets of the . . .
> services corresponding to the tenant subscriptions the individual
> tenants subscribed to, thereby allowing the individual tenants of
> the organization to utilize one or more of the . . . services
> provided by the datacenter or the additional . . . services
> according to the customized organizational plans.

Appeal Br. 27–28 (Claims App'x) ("steps (A)–(F)").

Steps (A) and (C)–(F), under their broadest reasonable interpretation, recite techniques for creating and managing organizational subscription service plans by an intermediary as the Examiner identified because these steps would ordinarily take place when an intermediary generates and manages subscription service plans for end users. *See id.*; *see* Final Act. 2 (stating claim 28 is "directed to the abstract idea of [the] management of [an] organizational subscription plan."); *see also* Spec. ¶ 6. Step (A) recites a preliminary activity an intermediary would take ordinarily (i.e., registering with the provider) prior to creating organizational subscription service plans for tenants so that tenants can access the provider's services. Appeal Br. 27 (Claims App'x). For example, T-Mobile (e.g., a datacenter provider) provides services (e.g., network providing voice and data services) to Consumer Cellular (e.g., organization), which is a T-Mobile mobile virtual network operator (MVNO) or reseller,[4] to consume upon collecting registration information from Consumer Cellular.[5] Similarly, step (C)

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[4] *BESTmvno*, https://bestmvno.com/mvnos/#what-is-an-mvno,
https://bestmvno.com/compare/t-mobile-mvnos/ (last visited Sept. 24, 2019).
[5] *BESTmvno*, https://bestmvno.com/mvnos/consumer-cellular/ (last visited
Sept. 24, 2019).

recites another activity, which would ordinarily take place by an intermediary after registering with the provider, that generates or creates customized service plans for tenants to access (e.g., services and additional services) available from the provider and intermediary. *Id.* For example, Consumer Cellular (e.g., the organization) repackages T-Mobile's (e.g., the datacenter provider) services and adds additional services (e.g., various pricing for voice, text, and data amounts) to generate multiple service plans (e.g., multiple customized organization plans with corresponding organizational quotas that comprise a subset of services provided by the datacenter provider).[6]

Step (D) recites another preliminary activity which would ordinarily take place by a tenant (i.e., receiving a tenant subscription request for an organization's service plan) prior to providing tenants with access to the requested plans. *Id.* For example, AARP end users (e.g., tenants) contact Consumer Cellular (e.g., the organization) and chose a 250 minute talk plan with 2 GB per month at a certain monthly price, requesting the AARP five percent discount.[7] Moreover, step (E) recites another initial activity which would ordinarily take place by an intermediary to manage subscription service plans (e.g., registering tenants with the organization) prior to tracking the tenant's usage of the provided services corresponding to the subset of services in the requested plans. *Id.* For example, Consumer

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[6] *Consumer Cellular Inc.*, https://www.consumercellular.com/Plans (last visited Sept. 24, 2019).

[7] *Consumer Cellular Inc.*, https://www.consumercellular.com/Plans, https://www.consumercellular.com/WhyUs#aarp (indicating Consumer Cellular has been "an approved AARP provider for over 10 years" and offers "a 5% discount off your monthly fees and usage charges") (last visited Sept. 24, 2019).

Cellular provides services (e.g., certain voice, data, and text services at various prices) for AARP end users (e.g., tenants) to consume upon collecting registration data from its tenants.[8] Lastly, step (F) recites an activity which would ordinary take place by an intermediary who manages its subscription service plans to allow tenants to use services according to the tenant's subscription. For example, Consumer Cellular tracks an AARP end user's voice/data usage and limits the user's voice/data usage to 250minutes/2 GB every month (e.g., a tenant subscription), which permits the tenant to use the services (e.g., voice, text, and data) provided by T-Mobile (e.g., the datacenter) or Consumer Cellular.

As another example, utility companies (e.g., Dominion Energy) act as an organizational subscriber to consume services of providers (e.g., fossil fuel and renewable power providers),[9] to create customized organization plans with services and additional services to its tenants (e.g., offer certain rates for certain months/time of day for power dependent on usage (e.g., kWh), plus certain surcharges and taxes),[10] and to track/limit a tenant's usage of their subscribed services (e.g., subscriber of the Smart Cooling Rewards)[11] as the above noted steps (A) and (C)–(F) recite.

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[8] *Consumer Cellular Inc.*,
https://shopping.consumercellular.com/cart/checkout/summary (where an AARP end user purchases the noted plan and provides contact/billing information) (last visited Sept. 24, 2019).
[9] *Dominion Energy, Inc.*, https://www.dominionenergy.com/suppliers (last visited Sept. 24, 2019).
[10] *Dominion Energy, Inc.*, https://www.dominionenergy.com/home-and-small-business/rates-and-regulation (last visited Sept. 24, 2019).
[11] *Dominion Energy, Inc.*, https://www.dominionenergy.com/home-and-small-business/energy-conservation-programs/smart-cooling-rewards (last visited Sept. 24, 2019).

Steps (A) and (C)–(F) involve certain methods of organizing human activity, including fundamental business practices (e.g., creating and managing organizational service plans) or commercial sales and marketing interactions (e.g., an organization generating customized organization plans to which the organization's tenants can subscribe). *See* Spec. ¶¶ 6, 24–28, 35, Figs. 1, 3; *see also Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1333 (Fed. Cir. 2015) (holding the claims are directed to "determining a price, using organizational and product group hierarchies, in the same way that the claims in *Alice* were directed to the abstract idea of intermediated settlement, and the claims in *Bilski* were directed to the abstract idea of risk hedging"); *see LendingTree, LLC v. Zillow, Inc.*, 656 F. App'x 991, 996 (Fed. Cir. 2016) (unpublished) (holding a claim reciting a loan-application clearinghouse, including allowing an Internet user to access services of lending institutions, as being an automation of a fundamental economic practice). Accordingly, at least steps (A) and (C)–(F) recite a fundamental business practice or sales interactions, which are certain methods of organizing human activity identified in the Revised Guidance, and thus recite an abstract idea. *See* 84 Fed. Reg. at 52.

Steps (A) and (C)–(E) further recite processes that can occur in a human's mind (or through pen and paper). Appeal Br. 27 (Claims App'x). For example, a person can register the organizational and tenant subscriptions (e.g., steps (B) and (E) by recording them in a subscription book using pen and paper). As another example, a person can *observe* (or record with pen and paper) an administrator's input as step (C) recites, and then generate multiple customized organizational plans mentally (or using pen and paper) by *evaluating* the services provided by the datacenter as step

(C) also recites. Similarly, a person can *observe* mentally (or with pen and paper) the subscription request made by the tenants as step (D) recites. Thus, with the exception of generic computer-implementation recited in claim 21, there is nothing in steps (A) and (C)–(E) that forecloses the steps from being performed mentally or with pen and paper. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) ("That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*"); *see also Mortg. Grader Inc. v. First Choice Loan Servs., Inc.*, 811 F.3d 1314, 1318, 1324 (Fed. Cir. 2016) (holding a claim reciting, among other things, allowing a borrower anonymously to access loan services of different lenders after a third party calculates the borrower's credit grading to be mental processes); *Benson*, 409 U.S. at 67 (indicating converting BCD numbers to pure binary numbers can be done mentally and that "mental processes . . . are not patentable, as they are the basics tools of scientific and technological work.").

For the above reasons, we conclude claim 28 as a whole is directed to certain methods of organizing human activity and mental processes, which are abstract ideas identified in the Revised Guidance. *See* Revised Guidance, 84 Fed. Reg. at 52. We thus disagree with Appellant that there (1) are not concepts the courts have deemed to be a judicial exception similar to claim 28 (or claim 21) as explained above (*see also* Final Act. 2–3; *see also* Ans. 4), or (2) were no subscription services prior to the advent of the Internet and cloud computing analogous to the recited services in claim 28 (or claim 21).

Accordingly, we determine claim 28 recites an abstract idea.

Revised Step 2A - Prong 2

Because claim 28 recites an abstract idea, we must determine whether the abstract idea is integrated into a practical application, namely whether the claim applies, relies on, or uses the abstract idea in a manner that imposes a meaningful limit on the abstract idea, such that the claim is more than a drafting effort designed to monopolize the abstract idea. *See* Revised Guidance, 84 Fed. Reg. at 53. We (1) identify whether there are any additional, recited elements beyond the judicial exception, and (2) evaluate those elements individually and collectively to determine whether they integrate the exception into a practical application. *See id.*, 84 Fed. Reg. at 54–55.

The additionally recited elements beyond the above-identified judicial exceptions in independent claims 28 and 35 are "a computer with a processor in a datacenter," "cloud" services, and step (B). Appeal Br. 27–30 (Claims App'x). Independent claim 21 further recites "one or more computer-readable storage media having stored thereon computer-executable instructions that, when executed by the one or more processors, cause the processors to" perform the judicial exceptions discussed previously. *Id.* at 25–26 (Claims App'x); *see* Final Act. 4. When considering these elements individually or in combination, we determine they do not integrate the above-identified judicial exceptions into a practical application.

Contrary to Appellant's assertions (*see* Appeal Br. 14–16; Reply Br. 4), the identified additional elements beyond the identified judicial exceptions do not reflect an improvement in a computer's functioning or an improvement to other technology or technical field as set forth in MPEP

§ 2106.05(a) and the Revised Guidance, 84 Fed. Reg. at 55. *See* Final Act.
4; Ans. 4. Here, consistent with the disclosure as discussed below, the
additionally recited elements merely automate certain methods of organizing
human activity or mental processes using generic computer elements. These
elements are tools that perform the above-identified abstract idea but do not
constitute a patentable improvement in computer technology. *See Credit
Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017);
see also Alice, 573 U.S. at 221, 223.

For example, claim 28 does not recite a computer or technological
improvement to the recited "computer with a processor in a datacenter"
(Appeal Br. 27 (Claims App'x)) and claim 21 does not recite a technological
improvement in the recited "computing system, comprising: one or more
processors; [and] one or more computer-readable storage media having
stored thereon computer-executable instructions" (*id.* at 25–26 (Claims
App'x)). Nor do these claims recite an improvement in their computer
functionality. Instead, these elements are merely used to implement the
above identified abstract idea. *See id.* at 25–28 (Claims App'x). The written
description further supports this conclusion. See Spec. ¶¶ 18 (describing
servers 201 as computing devices and showing one or more host processors
on each server 201),
56–57 (describing a system in a datacenter comprises one or more
processors that execute instruction to provide datacenter management
services and one or more computer-readable storage media), Fig. 2 (showing
one or more host processors on each server 201).

Thus, at best, the computer (claims 28 and 35), computing system
(claim 21), the processors (claims 21, 28, and 35), and datacenter (claims 21,

28, and 35) are used as tool to implement steps (A) and (C)–(F). Appeal Br. 25–30 (Claims App'x).

Also, claim 28 does not recite a computer or technological improvement in the recited "cloud" services or its computing functionality. The disclosure describes the recited "cloud" services as generally a type of service that is in a cloud-based environment. Spec. ¶¶ 1, 4, 16, 19, 23, Figs. 1–2. That is, claim 28's additional recitations do no more than generally link the use of a judicial exception to a particular technological environment or field of use without reciting an improving in that technological field (i.e., cloud services). *See Bilski*, 561 U.S. at 612 (citing *Flook* and discussing limiting an abstract idea to a field of use did not make the concept patentable); *see DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) (noting the claims recited various computer hardware elements but were directed to performing an abstract business practice on the Internet or using a conventional computer, which is not patent-eligible); *see Nextpoint, Inc. v. Hewlett-Packard Co.*, 227 F.Supp.3d 963, 968–69 (N.D. Ill. 2016), *aff'd*, 680 F. App'x 1009 (Fed. Cir. 2017) (recognizing the inventor does not claim to have invented "cloud computing" or any new component or feature whose particular use in the claimed method improves on legacy technologies).

Thus, we are not persuaded by Appellant's contention that the claimed invention is eligible because it is necessarily rooted in computer technology to overcome a problem as was the case in *DDR*. *See* Appeal Br. 17–18 (citing *DDR*). Here, allowing an organization's tenants to each access a subset of a datacenter's cloud services as claim 28 recites is not necessarily rooted in computer technology as previously explained. Moreover,

Appellant has not demonstrated adequately that the claimed invention solves a challenge specifically arising in the realm of computer networks as in *DDR*. At best, claim 21 improves a fundamental business practice or commercial interaction, which is directed to an abstract idea. *Accord* Final Act. 7–8; Ans. 6.

Moreover, the disclosure describes claim 28's step (B) that installs applications in a datacenter generally as merely software or a tool to provide additional cloud services accessible to tenants of an organization. *See Credit Acceptance Corp.*, 859 F.3d at 1056 (stating "merely 'configur[ing]' generic computers in order to 'supplant and enhance' an otherwise abstract manual process is precisely the sort of invention that the *Alice* Court deemed ineligible . . . .") (citing *Alice*, 573 U.S. at 220–25); *id.* at 1055 (discussing using generic computes to automate a manual process). More specifically, this step does not limit claim 28's process to any particular software or algorithm. *See* Spec. ¶¶ 20–21, 30. Additionally, step (B) can be considered insignificant pre-solution activity—installing generic software (i.e., applications) in a datacenter, which allows the organization to provide cloud services to the tenants. *See Bilski*, 561 U.S. at 610–11; *accord* Revised Guidance, 84 Fed. Reg. at 55 (citing MPEP § 2106.05(g)). Thus, step (B) does not integrate the judicial exception into a practical application for this additional reason.

That the claimed invention uses an intermediary (e.g., the recited organization, which acts as a reseller of the provider's cloud services (see Spec. ¶¶ 4, 6, 27, Fig. 3)) to perform any of steps (A)–(F) is of no consequence here, for it is well settled that using a computer-based, third-party intermediary to facilitate transactions is a method of organizing human

activity. *See Alice*, 573 U.S. at 220 (noting that "[t]he use of a third-party intermediary (or 'clearing house') is also a building block of the modern economy."); *see also LendingTree*, 656 F. App'x at 996 (holding claims merely using "a broker (i.e., a computer program on a loan-processing computer . . .) to organize the process is of no consequence" because the use of a third-party intermediary is a building block of the modern economy) (citation omitted).

For the above reasons, when considering the additional elements individually or in combination, they are no more than tools that perform the above-identified abstract idea and, therefore, do not integrate the abstract idea into a practical application.

To the extent that Appellant contends the recited steps (A)–(F) in claim 28 are "directed to specific improvements in the capabilities of a datacenter providing cloud services" (Appeal Br. 14), there is insufficient persuasive evidence on this record to substantiate this contention. For example, claim 28 is not limited to any particular cloud services or virtual technology as argued. *Id.* at 15. Also, as noted above, we do not see a specific improvement in the way the recited additional elements operate when performing claim steps (A)–(F) or an improvement to the computer's functionality. See *id.* at 14–16. Rather, claim 28 at best improves an abstract idea of how to provide and manage organizational/tenant subscription service plans within a cloud-computing environment. *See* Appeal Br. 27–28 (Claims App'x); see Spec. ¶ 6.

Appellant argues that the claimed invention improves a computer's functionality such as in *Enfish LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016). *See* Appeal Br. 14–15. We disagree. The claims in *Enfish* were

directed to an improved database configuration, including a self-referential table, which permitted faster searching for data. *See Enfish*, 822 F.3d at 1330–33, 1336. In contrast, as previously discussed, claim 28 (or claim 21) does not recite any particular database configuration or an advance in a data structure like *Enfish* that improves a computer's functionality. *See id.* at 1336–37, 1339 (noting that a "self-referential table for a computer database" improved the computer functionality, including the way the computer stored and retrieved data from memory).

Nor are we persuaded by Appellant's comparison of claim 28 (and claim 21) to the claims in *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1303 (Fed. Cir. 2018). *See* Appeal Br. 15–16. In *Finjan*, the court found that claims directed to a behavior-based virus scan constituted an improvement in computer functionality over the "traditional, 'code-matching' virus scans." *Finjan*, 879 F.3d at 1304. The court determined that the claimed method employs a new kind of file, allows access to be tailored for different users, and allows the system to accumulate and use newly available, behavior-based information about potential threats. *Id.* at 1305. The court ultimately held that the claims are "directed to a non-abstract improvement in computer functionality, rather than the abstract idea of computer security," and "recite specific steps generating a security profile that identifies suspicious code and linking it to a downloadable that accomplish the desired result." *Id.* Unlike the claims of *Finjan*, claim 28 (or claim 21) fails to employ a newly generated file containing security profile in a downloadable, and does not use a new file to enable a computer security system to improve on or add a computer functionality by reciting specific

steps accomplishing the desired security results. Thus, we are not persuaded claim 28 is sufficiently analogous to the claims in *Finjan*.

Appellant's reliance on the decision in *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356, 1362 (Fed. Cir. 2018) is equally unavailing. *See* Appeal Br. 16. The claim in *Core Wireless* was directed to an improvement in the functioning of computers, particularly those with small screens. *Core Wireless*, 880 F.3d at 1363 (finding the improvement was in "the efficiency of using the electronic device by bringing together 'a limited list of common functions and commonly accessed stored data,' which can be accessed directly from the main menu.").[12] That is not the case here. Despite Appellant's arguments to the contrary (*see* Appeal Br. 16), claim 28 (or claim 21) is not necessarily rooted in computer technology in the sense contemplated by *Core Wireless* where the claimed invention improved the computer's functioning. Although Appellant's invention uses computer-based components, the claimed invention does not improve those components, a computer's functioning, or improve another technology or technical field. Rather, as previously noted, claim 28 recites at best an improvement in the abstract idea of providing and managing subscriber service plans, and generally links the identified judicial exceptions to a particular field of use (e.g., cloud-computing environment).

Given the record, claim 28's additional elements beyond the identified judicial exceptions are not shown to improve a computer itself, computer

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[12] *Compare id.*, *with Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1378, 1385 (Fed. Cir. 2019) (finding claims that recite a purportedly new arrangement of generic information to assist traders in processing information more quickly do not improve the functioning of a computer, make it operate more efficiently, or solve any technological problem).

functionality, or another technology or technical field. *See* Revised

Guidance, 84 Fed. Reg. at 55 (citing MPEP § 2106.05(a)). Nor has

Appellant demonstrated that claim 28's additional elements (1) implement

the identified judicial exception with or use the judicial exception in

conjunction with a particular machine or transformation or (2) apply or use

the judicial exception in some other meaningful beyond generally linking the

use of the judicial exception to a particular technological environment. *See*

id. (citing MPEP §§ 2106.05(a), (c), (e)).

For the above-stated reasons, we determine the additional elements

recited in claim 28 beyond the judicial exception, whether considered alone

or in combination, are not integrated into a practical application.

<center>*Alice Step Two, Step 2B*</center>

Because we determine claim 28 does not integrate the recited judicial

exception into a practical application, we need to consider whether the

additional elements add a specific limitation or combination of limitations

that are not well-understood, routine, or conventional activity in the field.

See Revised Guidance, 84 Fed. Reg. at 56. If so, this indicates that an

inventive concept may be present. If, instead, the additional elements

simply append well-understood, routine, and conventional activities

previously known to the industry, specified at a high level of generality, to

the judicial exceptions, this indicates that an inventive concept may not be

present. *Id.*

The Examiner found certain limitations in claim 28 (e.g., one or more

processors) perform their routine, well-understood, and conventional

functions. Final Act. 4 (citing Spec. ¶ 18 and *Alice*), 6, 8. Appellant asserts

the Examiner's reliance on paragraph 14 of the Specification is erroneous at

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least because the Examiner failed to articulate which part of paragraph 14 teaches well-understood, routine, and conventional functions of a computing device. Reply Br. 3 (quoting Answer 4). We are not persuaded of error.

To be sure, the Examiner must show with supporting facts that certain claim elements are well-understood, routine, and conventional where such a finding is made. *See Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018*)* (noting that "[whether] something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination."); *see also* April 19, 2018, Memorandum from Robert W. Bahr, Deputy Commissioner for Patent Examination Policy to the Patent Examining Corps, entitled "Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)" ("*Berkheimer* Memo."). According to the *Berkheimer* Memorandum, Examiners must provide specific types of evidence to support a finding that an additional element of a claim is well-understood, routine, and conventional. *Berkheimer* Memo at 3–4.

The Examiner satisfied these requirements by providing citations to the Specification. *See* Final Act. 4 (citing Spec. ¶ 18), Ans. 4 (additionally citing Spec. ¶ 14); *see also Berkheimer* Memo. 3–4 (informing examiners to provide one or more of four specific types of evidence including "a citation to the Specification or statement made by applicant during prosecution that demonstrates the well-understood, routine, conventional nature of the additional element."). The Examiner additionally cited to *Alice* for support. Final Act. 4; *Alice*, 573 U.S. at 225 (noting a computer (1) creating and maintaining "shadow" accounts (e.g., electronic recordkeeping), (2) obtaining data, and (3) issuing automated instructions are well-understood,

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routine, and conventional activities); *see also Mortg. Grader*, 811 F.3d at 1324–25 (noting that components such an "interface," "network," and "database" are generic computer components that do not satisfy the inventive concept requirement).

We further add other passages in the Specification describe the additional elements in claims 21 and 28, such as the recited "computer with a processor," the recited "computing system comprising: one or more processors," "one or more computer-readable storage media having stored thereon computer-executable instructions," the recited "cloud" service, and the "installed applications" (i.e., the recited step (B)), generically or as previously known. *See* Spec. ¶¶ 1 (describing cloud computing in the Background section of the Specification), 3–4 (describing in the Background section existing cloud systems provide plans to subscribers and a datacenter is used to provide the cloud services to subscribers), 16–17, 19, 23 (describing datacenters and cloud computing services at a high level of generality), 56 (describing processors and storage media at a high level of generality), 20–21, 30, 57–60, 62 (describing instructions and installed applications at a high level of generality). Moreover, claim limitations related to programming devices to communicate and receive information, like recited step (B), can be considered conventional computer activities. *See OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1361, 1363 (Fed. Cir. 2015).

To the extent Appellant argues that claim 28 is eligible because "before the advent of the Internet and cloud computing, there was no such thing as allowing an individual tenant to subscribe to and access a subset of cloud services" (Appeal Br. 18), this argument is unavailing. The court in

DDR cautioned that "not all claims purporting to address Internet-centric challenges are eligible for patent." *DDR*, 773 F.3d at 1258. Aside from repeating claim language and making conclusory statements (*see* Appeal Br. 17–18), Appellant has not demonstrated persuasively that claim 28's additional elements provide significantly more than the recited judicial exception. Notably, many of the limitations (e.g., registering a subscription, generating organization plans, receiving request from tenants to subscribe) discussed by Appellant (*id.*) are part of the identified judicial exceptions (e.g., providing and managing subscription service plans) rather than the additional elements in claim 28, which, under the Revised Guidance, are evaluated to determine whether they provide an inventive concept.

Thus, Appellant fails to show sufficiently the recited additional elements in claim 28 add a specific limitation or combination of limitations that is not well-understood, routine, or conventional activity in the field. For the above reasons, the additional recited elements—considered individually and as an ordered combination—do not add significantly more than the abstract idea to provide an inventive concept under *Alice/Mayo* step two.

Conclusion

For the foregoing reasons, Appellant has not persuaded us of error in the rejection of independent claim 28 and claims 21, 22, 24, 29, 31, 35, 36, and 38 for similar reasons.

CLAIMS 25–27, 32–34, 39, AND 40

Appellant separately argues claims 25 and 26. Appeal Br. 19–21. Claims 32 and 33 depend from claim 28 and recite limitations commensurate with claims 25 and 26 respectively. *Compare id.* at 28 (Claims App'x), *with id.* at 26 (Claims App'x). Likewise, claim 39 recites features found in claim

25, and claim 40[13] recites limitations commensurate with claim 26.
Compare id. at 30 (Claims App'x), *with id.* at 26 (Claims App'x). Claim 27
depends from claim 26, and claim 34 depends from claim 33. *Id.* at 27, 29
(Claims App'x). We select claims 25 and 32 as representative of claims 25,
32, and 39 and claims 26 and 33 as representative of claims 26, 27, 33, 34,
and 40. *See* 37 C.F.R. § 41.37(c)(1)(iv).

Revised Step 2A - Prong 1

Claim 25 recite "the organizational subscription includes an
authorization to re-offer one or more of the cloud services provided by the
datacenter according to the organizational subscription," and claim 32
recites a commensurate limitation. Appeal Br. 26, 28 (Claims App'x).
Claim 26 recites "the organizational subscription includes an authorization
to re-offer one or more of the cloud services provided by the datacenter
according to the organizational subscription and a number of times the one
or more of the cloud services are authorized to be re-offered,"[14] and claim 33
recites a commensurate limitation. *Id.* Each of claims 25 and 26 (and
similarly claims 32 and 33) further limit step (A) of claim 21 (or claim 28)
respectively, specifying what the organizational subscription includes. Thus,
the recited instructions of claims 25 and 26 (or the recited steps of claims 32
and 33), each fall squarely within the certain methods of organizing human
activity or mental processes judicial exception (e.g., providing and managing

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[13] Notably, claim 40, which is similar to claim 33, also depends from claim
28. *Compare* Appeal Br. 30 (Claims App'x), *with id.* at 28 (Claims App'x).
[14] We note in passing that "the computer-executable instructions, when
executed by the one or more processors, cause the processors to:" as recited
in claim 26, appears misplaced.

organizational subscriber service plans) as explained above and therefore, further limit or recite the identified abstract idea.

Claim 25 and claim 26 (as well as claims 32 and 33) each include an additional instruction or step reciting "re-offer[ing] the one or more of the cloud services to tenants in the organization according to the authorization." The recited additional instruction or step is an activity which would ordinarily take place to offer services so that each of the organization's tenants can access the claimed services. Thus, the recited additional step in claims 25, 26, 32, and 33 falls squarely within the certain methods of organizing human activity or mental processes judicial exception as explained above and therefore, recite an abstract idea.

For the above reasons, we conclude claims 25, 26, 32, and 33 as a whole recite certain methods of human activity or mental processes identified in the Revised Guidance.

Revised Step 2A - Prong 2

The additionally recited element beyond the above-identified judicial exceptions in (1) claims 25 and 26 (i.e., "the computer-executable instructions, when executed by the one or more processors, cause the processors" to perform the certain methods of human activity or mental processes discussed above) or (2) claims 32 and 33 (i.e., "cloud" services provided by the datacenter") are those discussed above concerning claims 21 and 28. As previously stated, these additional elements do not integrate the abstract idea into a practical application.

Accordingly, claims 25, 26, 32, and 33 do not integrate the abstract idea into a practical application and, therefore, are directed to an abstract idea.

Alice Step Two, Step 2B

Similarly, for the reasons discussed above concerning claims 21 and 28, we do not find that the additional elements in claims 25, 26, 32, and 33 noted previously—considered individually and as an ordered combination—add significantly more to the abstract idea to provide an inventive concept under *Alice/Mayo* step two. *See Alice*, 573 U.S. at 221; *see also* Revised Guidance, 84 Fed. Reg. at 56. Therefore, we are not persuaded that the Examiner erred in rejecting claims 25, 26, 32, and 33 under § 101.

Conclusion

For the foregoing reasons, Appellant has not persuaded us of error in the rejection of (1) claims 25, 26, 32, and 33, and (2) claims 27, 34, 39, and 40, which are not separately argued.

CONCLUSION

Claim(s) Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
21	101	Eligibility, signal *per se*	21	
21, 22, 24–29, 31–36, 38–40	101	Eligibility, judicial exception without significantly more	21, 22, 24–29, 31–36, 38–40	
Overall Outcome			21, 22, 24–29, 31–36, 38–40	

AFFIRMED