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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* JEROME ROLIA, SHIVA PRAKASH,  
and MUSTAZIRUL ISLAM

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Appeal 2017-011005  
Application 12/815,207<sup>1</sup>  
Technology Center 3600

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Before ELENI MANTIS-MERCADER, JASON J. CHUNG, and  
JOYCE CRAIG, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final Rejection of claims 1, 3–5, 7–13, 15–20, and 22.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

INVENTION

The invention is directed to creating a capacity planning scenario.

Abstract. Claim 1 is illustrative of the invention and is reproduced below:

1. A method for creating a capacity planning scenario using a computing system, comprising:

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<sup>1</sup> According to Appellants, Hewlett Packard Enterprise Development LP is the real party in interest. App. Br. 1.

<sup>2</sup> Claims 2, 6, 14, 21, 23, and 24 are canceled. Claims Appendix i.

maintaining, with a computer processor of the computing system, a topology model of information technology components as relating to computing resources in a configuration management database, wherein the topology model includes information about the computing resources;

maintaining, with the computer processor, a facilities model comprising information about physical facilities in which the computing resources are used;

maintaining, with the computer processor, a workload model of workload constraints for workloads on the computing resources, wherein the workload constraints comprise limits on at least one of how, when, and where the workload is to be used with regards to the computing resources;

maintaining, with the computer processor, a service model of business services for workloads on the computing resources, wherein the service model comprises first relationships between workloads and demand traces;

assigning, with the computer processor, first constraint tags to the computing resources within the topology model, workload model, and service model, wherein the first constraint tags comprise information about topology relationships, workload constraints, and service model services;

assigning, with the computer processor, second constraint tags to the physical facilities within the facilities model;

assigning, with the computer processor, third constraint tags to measurement data for the computing resources; and

generating, with the computer processor, a capacity planning scenario for a computing environment comprising the business services, workloads, and computing resources based on the first, second, and third constraint tags.

#### REJECTIONS AT ISSUE

Claims 1, 3–5, 7–13, 15–20, and 22 stand rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Final Act. 2–19.

Claims 1, 4, 5, 7–13, 15–17, 19, 20, and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Rolia (US

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2008/0271039 A1; published Oct. 30, 2008), Gupta et al. (US 2009/0089072 A1; published Apr. 2, 2009), and Oeda (US 2009/0055507 A1; published Feb. 26, 2009). Final Act. 19–59.

Claims 3 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Rolia, Gupta, Oeda, and Gibbs (“*IBM eServer pSeries Capacity Planning: ISV Tools*,” 2004, IBM Redbooks Paper). Final Act. 59–61.

Claims 4 and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Rolia, Gupta, Oeda, and Gibbs. Final Act. 62–65.

## ANALYSIS

### *I. 35 U.S.C. § 101 Rejections*

#### *A. Claims 1, 3–5, 9–13, 15–20, and 22*

##### *1. The Examiners Conclusions and Appellants’ Arguments*

The Examiner concludes the present claims are directed to an abstract idea of a mental process. Final Act. 7. And the Examiner concludes the present claims can be performed with pen and paper. *Id.* The Examiner determines the present claims do not amount to significantly more than an abstract idea because the Examiner finds the abstract idea is implemented on a computer using generic computer functions that are well-understood, routine, and conventional activities previously known to the industry. *Id.* at 6.

Appellants argue, similar to *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1308–14 (Fed. Cir. 2016) and *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), the present claims are directed to an improvement in planning and deployment of information

technology infrastructure that includes computing resources. App. Br. 7–8; Reply Br. 2–6. Appellants argue the Specification illustrates the improvement by disclosing that capacity modeling and planning can ensure appropriate system resources are available to handle workloads of business services. App. Br. 9; Reply Br. 6–8.

Appellants argue that, similar to *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) and *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016), the present claims are significantly more than any abstract idea because the present claim are directed to inventive subject matter. App. Br. 10–11; Reply Br. 8–10. We disagree with Appellants.

## 2. *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 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, 192 (1981)); “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores” (*id.* at 184 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176; *see also id.* at 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 PTO recently 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 interactions such as a fundamental economic practice, or mental processes); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* 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.

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

### 3. Discussion

#### i. Step 2A, Prong 1 (Alice Step 1)

As an initial matter, we discern no error in the Examiner’s conclusion that the present claims are directed to an abstract idea of a mental process that can be performed with pen and paper. Final Act. 7. We consider claim 1 (with emphases), reproduced below.

1. A method for creating a capacity planning scenario using a computing system, comprising:

*maintaining, with a computer processor of the computing system, a topology model of information technology components as relating to computing resources in a configuration management database, wherein the topology model includes information about the computing resources;*

*maintaining, with the computer processor, a facilities model comprising information about physical facilities in which the computing resources are used;*

*maintaining, with the computer processor, a workload model of workload constraints for workloads on the computing resources, wherein the workload constraints comprise limits on*

*at least one of how, when, and where the workload is to be used with regards to the computing resources;*

*maintaining, with the computer processor, a service model of business services for workloads on the computing resources, wherein the service model comprises first relationships between workloads and demand traces;*

*assigning, with the computer processor, first constraint tags to the computing resources within the topology model, workload model, and service model, wherein the first constraint tags comprise information about topology relationships, workload constraints, and service model services;*

*assigning, with the computer processor, second constraint tags to the physical facilities within the facilities model;*

*assigning, with the computer processor, third constraint tags to measurement data for the computing resources; and*

*generating, with the computer processor, a capacity planning scenario for a computing environment comprising the business services, workloads, and computing resources based on the first, second, and third constraint tags.*

We conclude the emphasized portions of claim 1 are directed to the abstract idea of a mental process that can be performed with pen and paper. Independent claims 5 and 16 recite similar features.

We, thus, disagree with Appellants' argument that similar to *McRO* and *Enfish*, the present claims are directed to an improvement in planning and deployment of information technology infrastructure that includes computing resources. App. Br. 7–8; Reply Br. 2–6. We also disagree with Appellants' argument that the Specification illustrates the improvement by disclosing that capacity modeling and planning can ensure appropriate

system resources are available to handle workloads of business services.  
App. Br. 9; Reply Br. 6–8.

Because the present claims recite a mental process, we proceed to prong 2.

*ii. Step 2A, Prong 2 (Alice Step 2)*

From reproduced claim 1, shown above in the discussion pertaining to *Alice* step 1, prong 1, claim 1 recites additional limitations pertaining to a computer processor. The recitation of a computer processor in claim 1 is recited at a high level of generality. This generic processor limitation is no more than a generic computer component.

Accordingly, this additional element does not integrate the abstract idea into a practical application because it does not impose any meaningful limits on practicing the abstract idea. Because the present claims are directed to an abstract idea, we proceed to Step 2B.

*iii. Step 2B (Alice Step 2 Continued)*

We discern no error in the Examiner’s determination that the present claims do not amount to significantly more than an abstract idea because the Examiner finds the abstract idea is implemented on a computer using generic computer functions that are well-understood, routine, and conventional activities previously known to the industry. Final Act. 6. Moreover, Appellants’ Specification states “[m]odules may also be implemented in software for execution by **various types of processors**” (emphasis added) indicating generic processors. Spec. 13:33–34.

We disagree with Appellants’ argument that, similar to *DDR* and *BASCOM*, the present claims are significantly more than any abstract idea because the present claim are directed to inventive subject matter (App. Br.

10–11; Reply Br. 8–10) for reasons stated *supra* in the discussion of *Alice* Step 1.

Appellants do not argue separately claims 3–5, 9–13, 15–20, and 22 with particularity. App. Br. 6–12. Accordingly, we sustain the Examiner’s rejection of claims 1, 3–5, 9–13, 15–20, and 22 under 35 U.S.C. § 101.

*iv. Claims 7–8*

Claim 7 recites “*wherein creating the capacity planning scenario further comprises solving for potential changes in future usage of the computing resource*” (emphasis added).

The Examiner concludes that the present claims are directed to an abstract idea of a mental process that can be performed with pen and paper. Final Act. 7. And the Examiner determines that the present claims do not amount to significantly more than an abstract idea because the Examiner finds the abstract idea is implemented on a computer using generic computer functions that are well-understood, routine, and conventional activities previously known to the industry. *Id.* at 6.

Appellants argue this improves computer functionality because it is directed to solving for potential changes in future usage of computing resources. App. Br. 12; Reply Br. 10–11.

We conclude the emphasized portions of claim 1 are directed to the abstract idea of a mental process that can be performed with pen and paper. Claim 7 does not integrate the abstract idea into a practical application because it does not impose any meaningful limits on practicing the abstract idea. Because the present claims are directed to an abstract idea, we proceed to *Alice* Step 2.

We discern no error in the Examiner’s determination that the present claims do not amount to significantly more than an abstract idea because the Examiner finds the abstract idea is implemented on a computer using generic computer functions that are well-understood, routine, and conventional activities previously known to the industry. Final Act. 6; Spec. 13:33–34.

Appellants do not argue separately claim 8 with particularity. App. Br. 12; Reply Br. 11. Accordingly, we sustain the Examiner’s rejection of claims 7–8 under 35 U.S.C. § 101.

*II. 35 U.S.C. § 103 Rejections*

*A. Claims 1, 4, and 22*

The Examiner finds Rolia teaches capacity or assigning a workload, which the Examiner maps to the limitation “assigning, with the computer processor, third constraint [] to measurement data for the computing resources” recited in claim 1. Ans. 7 (citing Rolia ¶ 28). The Examiner finds Gupta teaches tags. Ans. 7–8 (citing Gupta ¶¶ 18–19).

Appellants argue Rolia’s capacity teach the limitation “assigning, with the computer processor, third constraint [] to measurement data for the computing resources” because it lacks a teaching of “assigning.” Reply Br. 11–12.<sup>3</sup> Appellants argue Rolia and Gupta cannot teach the limitation “third constraint tags” because Gupta merely teaches policy tags. App. Br. 16–17; Reply Br. 14–16. We disagree with Appellants.

The cited portions of Rolia teach capacity (i.e., a capacity is a constraint that is assigned to measurement data), which teaches the

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<sup>3</sup> Appellants argument is timely because the Examiner changed their theory from saying Rolia’s “measures” teaches “constraint” to Rolia’s “capacity” teaches “constraint.” *Compare* Final Act. 22 *with* Ans. 7.

limitation “assigning, with the computer processor, third constraint [] to measurement data for the computing resources” recited in claim 1. Ans. 7 (citing Rolia ¶ 28).

Regarding Appellant’s argument pertaining to Gupta failing to teach “third constraint tags” (App. Br. 16–17; Reply Br. 14–16), we disagree with Appellants because one cannot show nonobviousness “by attacking references individually” where the rejections are based on combinations of references. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (citing *In re Keller*, 642 F.2d 413, 425 (CCPA 1981)). In this case, the cited portions of Gupta relied upon by the Examiner teach policy tags and Rolia teaches the limitation “assigning, with the computer processor, third constraint [] to measurement data for the computing resources” recited in claim 1. Ans. 7–8 (citing Rolia ¶ 28; Gupta ¶¶ 18–19).

Appellant does not argue separately claims 4 and 22 with particularity. App. Br. 12–17. Accordingly, we sustain the Examiner’s rejection of claims 1, 4, and 22 under 35 U.S.C. § 103.

*B. Claims 5, 7–13, 15–17, 19, and 20*

The Examiner finds the combination of Rolia, Gupta, and Oeda teaches the limitations of claims 5, 7–13, 15–17, 19, and 20. Final Act. 19–59.

Appellants argue claims 5, 7–13, 15–17, 19, and 20 are non-obvious over Rolia, Gupta, and Oeda for the same reasons argued with respect to claim 1 and, in particular, these references fail to teach “second constraint tags” recited in independent claim 16 (and similarly recited in independent claim 5). We disagree with Appellants.

At the outset, we sustain the Examiner's rejection for at least the reasons we sustain the Examiner's rejection of claims 1, 4, and 22 under 35 U.S.C. § 103. That said, in claim 1, the issue focused on whether the references teach "third constraint tags," whereas Appellants seem to be arguing "second constraint tags" with respect to claims 5, 7–13, 15–17, 19, and 20. To the extent that Appellants are arguing "second constraint tags," we note that Appellants do not proffer sufficient arguments with respect to "second constraint tags."

Additionally, in order to rebut a prima facie case of unpatentability, Appellants must distinctly and specifically point out the supposed Examiner errors, and the specific distinctions believed to render the claims patentable over the applied references. *See* 37 C.F.R. § 41.37(c)(vii) ("A statement which merely points out what a claim recites will not be considered an argument for separate patentability of the claim."); *see also In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) ("[W]e hold that the Board reasonably interpreted Rule 41.37 to require more substantive arguments in an appeal brief than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art."); *cf. In re Baxter Travenol Labs.*, 952 F.2d 388, 391 (Fed. Cir. 1991) ("It is not the function of this court to examine the claims in greater detail than argued by an appellant, looking for [patentable] distinctions over the prior art.").

Appellants do not argue separately claims 5, 7–13, 15–17, 19, and 20 with particularity. App. Br. 17–18. Accordingly, we sustain the Examiner's rejection of claims 5, 7–13, 15–17, 19, and 20 under 35 U.S.C. § 103.

*C. Claims 3 and 18*

The Examiner finds Gibbs's reducing the number of CPUs for licensing reasons, which the Examiner maps to the limitation "assigning a constraint tag to one of the computing resources to reflect a licensing agreement associated with the computing resource" recited in claim 3. Final Act. 59–60 (citing Gibbs, 78).

Appellants argue Gibbs's reducing the number of CPUs for licensing reasons does not involve assigning such a constraint tag to a computing resource to reflect a licensing agreement associated with the computing resource. We disagree with Appellants.

The cited portions of Gibbs teach reducing the number of CPUs for licensing reasons, which at least suggests the limitation "assigning a constraint tag to one of the computing resources to reflect a licensing agreement associated with the computing resource" recited in claim 3. Final Act. 59–60 (citing Gibbs, 78).

Appellant does not argue separately claim 18 with particularity. App. Br. 18–20. Accordingly, we sustain the Examiner's rejection of claims 3 and 18 under 35 U.S.C. § 103.

DECISION

We affirm the Examiner's decision rejecting claims 1, 3–5, 7–13, 15–20, and 22 under 35 U.S.C. § 101.

We affirm the Examiner's decision rejecting claims 1, 3–5, 7–13, 15–20, and 22 under 35 U.S.C. § 103(a).

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).

AFFIRMED