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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN JASON BRZOZOWSKI and CHRIS GRIFFITHS

Appeal 2018-005019
Application 13/724,405
Technology Center 2400

Before JENNIFER S. BISK, LARRY J. HUME, and MELISSA A. HAAPALA, *Administrative Patent Judges*.

HUME, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant,¹ Comcast Cable Communications, LLC, appeals from the Examiner's decision rejecting claims 1–8, 10, 15, 21, 22 and 24–31, which are all claims pending in the application. Appellant has canceled claims 9, 11–14, 16–20, and 23. Final Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Comcast Cable Communications, LLC. Appeal Br. 3.

STATEMENT OF THE CASE²

Appellant’s disclosed embodiments and claimed invention relate to “a protocol and process for use by caching domain name services (DNS) servers to share data more efficiently, and provide improved response time for DNS server queries. The benefits include increased DNS server efficiency.” Spec. ¶ 4.

Exemplary Claim

Claim 1, reproduced below, is representative of the subject matter on appeal (*emphases* added to contested prior-art limitations):

1. A method comprising:

receiving, by a first domain name services (DNS) device of a plurality of DNS devices, a reply to a query for access to a resource record;

caching, by the first DNS device, the reply; and

transmitting, to a second DNS device of the plurality of DNS devices, and prior to receiving, from the second DNS device, a request associated with the resource record, information of the reply, wherein the first DNS device is associated with a first load balancer device and the second DNS device is associated with a second load balancer device.

Appeal Br. 13 (Claims App.).

² Our decision relies upon Appellant’s Appeal Brief (“Appeal Br.,” filed Nov. 9, 2017); Reply Brief (“Reply Br.,” filed Apr. 13, 2018); Examiner’s Answer (“Ans.,” mailed Feb. 16, 2018); Final Office Action (“Final Act.,” mailed Apr. 26, 2017); and the original Specification (“Spec.,” filed Dec. 21, 2012) and amendments thereto.

Prior Art

The Examiner relies upon the following prior art as evidence in rejecting the claims on appeal:

Bahl et al. (“Bahl”) US 7,653,700 B1 Jan. 26, 2010

Rejections on Appeal

R1. Claims 1–8, 10, 15, 21, 22, and 24–31 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bahl. Final Act. 2.

R2. Claims 1–8, 10, 15, 21, 22, and 24–31 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or abstract idea) without significantly more. Ans. 9.³

ISSUES AND ANALYSIS

We agree with particular arguments made by Appellant with respect to claims 1–8, 10, 15, 21, 22, and 24–31 in Rejections R1 and R2, and we highlight and address specific findings and arguments regarding claim 1 for emphasis as follows.

1. § 102(b) Rejection R1 of Claims 1–8, 10, 15, 21, 22, and 24–31

Issue 1

Appellant argues (Appeal Br. 4–7; Reply Br. 2–4) the Examiner’s rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Bahl is in error. These contentions present us with the following issue:

³ We note Rejection R2 under § 101 of claims 1–8, 10, 15, 21, 22 and 24–31 was applied as a new ground of rejection in the Examiner’s Answer.

Did the Examiner err in finding the cited prior art discloses a method that includes, *inter alia*, the step of “transmitting, to a second DNS device of the plurality of DNS devices, and prior to receiving, from the second DNS device, a request associated with the resource record, information of the reply, wherein the first DNS device is associated with a first load balancer device and the second DNS device is associated with a second load balancer device,” as recited in claim 1?

Analysis

The Examiner cites to Bahl as disclosing the disputed “transmitting” limitation of claim 1. Final Act. 3 (citing Bahl 8:40–44; 9:7–62; Fig. 2, elements 212, 214, 218). However, we agree with Appellant that the Examiner does not clearly map the claim limitations to the cited prior art.

Appellant specifically argues:

[T]he Office merely lists the features of claim 1, along with various figures and passages of Bahl, without providing sufficient explanation. For example, in explaining the rejection to claim 1 the Office states, on page 3 of the Final Office Action, “transmitting (e.g., see col. 8 (lines 40-44) and col. 9 (lines 7-62)), to a second DNS device (e.g., see figure 2 (a different 218 and 214 (col. 8 (line 37)) than implemented in step 6(a) above) of the plurality of DNS devices, and prior to receiving, from the second DNS device, a request associated with the resource record (e.g., see col 10 (lines 12-42)), information of the reply (e.g., see col. 8 (lines 40-44) and col. 9 (lines 7-62)), wherein the first DNS device is associated with a first load balancer device (e.g., see figure 2 (212)) and the second DNS device is associated with a second load balancer device (e.g., see figure 2 (214)).” Final Office Action, p. 3 (parentheticals in original).

The MPEP states that “[a] claim is anticipated only if each and every element as set forth in the claim is found, either

expressly or inherently described, in a single prior art reference.” MPEP § 2131. In addition, the MPEP states that “[t]he identical invention must be shown in as complete detail as is contained in the claim.” MPEP § 2131. In the present case, the Office has not established that each feature of claim 1 is described in Bahl. Instead, the Office merely appended a citation to various features recited within claim 1, without providing any reasoning or explanation as to how these citations anticipated the claimed features. As such, to the Office has failed to properly explain the rationale behind the § 102 rejection

Appeal Br. 6–7.

We agree with Appellant that the rejection of the disputed “transmitting” limitation is not clearly mapped to the Bahl reference, and any such mapping provided by the Examiner contains little or no explanation as to how the disputed claim limitation reads on the cited portions of Bahl. *See* Final Act. 2–3. For example, the Examiner cites Bahl at column 9, lines 7–62 for a significant portion of the rejection. *See* Final Act. 3. The cited portion of Bahl states:

Once the backbone deployed domain name servers 218, etc. have the IP address information for the various contracting enterprises’ Web sites, this information may be communicated to the numerous first-level load balancing domain name servers (DNS-LB) 212, 214, 216, etc. via communication lines 222, 224, and 226. This information may be multicast to all of the load balancing domain name servers in the first level of the DGLB infrastructure, or it may be unicast to only particular load balancing domain name servers to whom an inquiry is being referred.

Bahl (9:7–17).

While disclosure of multicasting “information” to other load balancing domain name servers may suggest, at minimum, sharing of

information, it is unclear to us, and the Examiner has not explained how Bahl's teaching of multicast IP address information discloses the claimed "transmitting, to a second DNS device of the plurality of DNS devices, and prior to receiving, from the second DNS device, a request associated with the resource record, information of the reply, wherein the first DNS device is associated with a first load balancer device and the second DNS device is associated with a second load balancer device," as recited in claim 1. In particular, it is not clear from the cited passage or the Examiner's reasoning, that the "IP address information" in Bahl is the same as the claimed "information of the reply" (i.e., information transmitted as a reply to a query for access to a resource record) and that the multicast transmission occurs prior to "receiving a request for a resource record."

The Examiner makes further findings with respect to various dependent claims, again without clear mappings of the dependent claim limitations to the Bahl reference. *See* Final Act. 3. For example, with respect to dependent claims 2 through 8, the Examiner merely states, without associating specific claim limitations to particular disclosures of Bahl, "[p]er claim 2, claim 3, claim 4, claim 5, claim 6, claim 7, and claim 8, Bahl" teaches

receiving, by the first DNS device, the query (e.g., see Abstract, figure, col. 10 (line 15-52)) which was forwarded, by the first DNS device, to an authoritative DNS server (e.g., see figure 2 (204) and col. 7 (last line) to col. 8 (line 9)) from the first load balancer device (queries were propagated, redirected, per col 10 (lines 12-42)). Wherein the caching is based on a time to live value (e.g., see col. 10 (lines 52-54)) associated with the resource record web site's (e.g., see col. 3 (lines 23-26)) resolved Internet Protocol Address (e.g., see Abstract) which was transmitted from the first DNS device to all other DNS

devices in the plurality of DNS devices (per col. 8 (lines 40-44) and col. 9 (lines 7-62)), the information of the reply (e.g., see Abstract, figure, col. 10 (lines 15–52)). Since Bahl detailed the use of conventional Internet Domain Name Servers, as indicated above, and in view of the limited teaching by the applicant's paragraph [32 {specifically line 1 “the transaction signature (TSIG)” has no antecedent thus indicating TSIG was prior art in DNS systems}], on page 11 of the applicant's specification, then such DNSs of Bahl encompassed security measures which implemented security signature keys as found on those of col. 8 (line 38).

Final Act. 3.

Thus, with respect to these dependent claims,⁴ we agree with Appellant that “the Office merely appended a citation to various features recited . . . without providing any reasoning or explanation as to how these citations anticipated the claimed features. As such, to the Office has failed to properly explain the rationale behind the § 102 rejection.” Appeal Br. 6.

Accordingly, based upon the findings above, on this record, we are persuaded of at least one error in the Examiner’s reliance on the cited prior art to disclose the disputed limitation of claim 1, such that we find error in the Examiner’s resulting finding of anticipation. For essentially the same reasons argued by Appellant, above, we reverse the Examiner’s rejection of independent claims 10 and 21, which recite the disputed limitation in

⁴ Appellant separately argues against the anticipation rejection of dependent claims 8 and 30 (Appeal Br. 10–11); separately argues against the rejection of independent claim 10 (Appeal Br. 7–9), and independent claim 21. Reply Br. 5–6.

commensurate form. For the same reasons, we also reverse the rejections of all claims 2–8, 15, 22, and 24–31 that depend therefrom.⁵

2. § 101 Rejection R2 of Claims 1–8, 10, 15, 21, 22 and 24–31

Issue 2

Appellant argues (Reply Br. 7–12) the Examiner’s rejection of claim 1 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter is in error. These contentions present us with the following issue:

Under the USPTO’s Revised Guidance, informed by our governing case law concerning 35 U.S.C. § 101, is claim 1 patent-ineligible under § 101?

Principles of Law

A. 35 U.S.C. § 101

An invention is patent-eligible if it is a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101.⁶ 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.*,

⁵ Because we agree with at least one of the dispositive arguments advanced by Appellant, we need not reach the merits of Appellant’s other arguments. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (finding an administrative agency is at liberty to reach a decision based on “a single dispositive issue”).

⁶ This threshold analysis of whether a claim is directed to one of the four statutory categories of invention, i.e., a process, machine, manufacture, or composition of matter, is referred to as “*Step 1*” in the USPTO’s patent-eligibility analysis under § 101. MPEP § 2106.

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. 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, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diehr*, 450 U.S. at 191); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

Abstract ideas may include, but are not limited to, fundamental economic practices, methods of organizing human activities, and

mathematical formulas or relationships. *Alice*, 573 U.S. at 217–21. Under this guidance, we must therefore ensure at step one that we articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful. *Id.* at 217 (“[W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must examine the elements of the claim to determine whether it contains an “inventive concept” sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice*, 573 U.S. at 221 (citation omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (alterations in original) (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.*

B. USPTO Revised Guidance

The USPTO published revised guidance in the Federal Register concerning the application of § 101. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (January 7, 2019) (hereinafter “Revised Guidance”) (<https://www.govinfo.gov/content/pkg/FR-2019-01-07/pdf/2018-28282.pdf>).

Under the Revised 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);⁷ and

(2) additional elements that integrate the judicial exception into a practical application (*see* Manual for Patent Examining Procedure (“MPEP”) §§ 2106.05(a)–(c), (e)–(h)).⁸

See Revised Guidance 52–53.

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.⁹

See Revised Guidance 56.

We further note, “[t]he 2019 Revised Patent Subject Matter Eligibility Guidance does not change Step 1 or the streamlined analysis, which are discussed in MPEP 2106.03 and 2106.06, respectively. Examiners may continue to use a streamlined analysis (Pathway A) when the patent eligibility of a claim is self-evident.”¹⁰

⁷ Referred to as “*Revised Step 2A, Prong 1*” in the Revised Guidance (hereinafter “*Step 2A(i)*”).

⁸ Referred to as “*Revised Step 2A, Prong 2*” in the Revised Guidance (hereinafter “*Step 2A(ii)*”).

⁹ Items (3) and (4) continue to be collectively referred to as “*Step 2B*” of the Supreme Court’s two-step framework, described in *Mayo* and *Alice*.

¹⁰ *See* MPEP § 2106 Patent Subject Matter Eligibility [R-08.2017] (III. SUMMARY OF ANALYSIS AND FLOWCHART) — Pathway A.

Analysis

Claim 1 recites:

1. A method comprising:

receiving, by a first domain name services (DNS) device of a plurality of DNS devices, a reply to a query for access to a resource record;

 caching, by the first DNS device, the reply; and

 transmitting, to a second DNS device of the plurality of DNS devices, and prior to receiving, from the second DNS device, a request associated with the resource record, information of the reply, wherein the first DNS device is associated with a first load balancer device and the second DNS device is associated with a second load balancer device.

Spec. 13 (Claims App.).

While it is true that claim 1 (and similarly for independent claims 10 and 21) recite receiving, storing (caching), and transmitting of information, we find such data processing could not be reasonably carried out but for the use of the recited computer devices, i.e., DNS devices and load balancer devices. We conclude this clearly makes claim 1 more than a mental process that could be carried out in the human mind and/or by pen and paper. We further conclude the claim is removed from any other category of abstract idea under the *2019 Revised Guidance*, i.e., mathematical concepts or certain methods of organizing human activity.

In particular, under the streamlined analysis (*see* MPEP § 2106.06), we conclude, when viewed as a whole, the patent eligibility of the claims on Appeal is self-evident.

Accordingly, we do not sustain the Examiner's § 101 rejection of claims 1–8, 10, 15, 21, 22 and 24–31.

CONCLUSIONS

(1) The Examiner erred with respect to anticipation Rejection R1 of claims 1–8, 10, 15, 21, 22 and 24–31 under 35 U.S.C. § 102(b), and we do not sustain the rejection.

(2) Under our Revised Guidance, governed by relevant case law, claims 1–8, 10, 15, 21, 22 and 24–31 are not patent-ineligible under 35 U.S.C. § 101, and we do not sustain the rejection.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Basis / References	Affirmed	Reversed
1–8, 10, 15, 21, 22, 24–31	102(b)	Anticipation Bahl		1–8, 10, 15, 21, 22, 24–31
1–8, 10, 15, 21, 22, 24–31	101	Subject Matter Eligibility		1–8, 10, 15, 21, 22, 24–31
Overall Outcome				1–8, 10, 15, 21, 22, 24–31

FINALITY AND RESPONSE

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. § 41.50(f).

REVERSED