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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DAVID ALLEN ROSE

Appeal 2019-000625
Application 14/698,929[1]
Technology Center 2400

Before ST. JOHN COURTENAY, III, MARC S. HOFF, and KRISTEN L. DROESCH, *Administrative Patent Judges*.

HOFF, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from the Examiner's Final Rejection of claims 1–22. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

Appellant's invention is a system and method for managing network resources. The method includes the steps of receiving first information relating to network traffic parameters and receiving second information relating to one or more contextual events, external to the network, having an

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. Appellant states that Comcast Cable Communications, LLC is the real party in interest. Appeal Br. 1.

effect on network traffic parameters. The first information and second information are correlated. One or more network resources are then allocated based on the correlation of the first information and second information. Abstract.

Claim 1 is reproduced below:

1. A method comprising:

receiving, by one or more computing devices, first information relating to network traffic parameters associated with a network;

receiving, by the one or more computing devices, second information relating to one or more contextual events having an effect on the network traffic parameters, wherein the one or more contextual events are external to the network, and wherein the second information comprises an indication of a location of the one or more contextual events;

correlating, by the one or more computing devices, the first information and the second information; and

allocating one or more network resources based on the correlation of the first information and the second information, wherein the allocating the one or more network resources are associated with the location of the one or more contextual events.

REFERENCES

The prior art relied upon by the Examiner as evidence is:

Name	Reference	Date
Hildebrand	US 2012/0144038 A1	June 7, 2012
Friedlander	US 2014/0207936 A1	July 24, 2014

Claims 1–22 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Final Act. 5.

Claims 1–22 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hildebrand and Friedlander.

Throughout this decision, we make reference to the Specification filed April 29, 2015 ("Spec."); the Appeal Brief filed May 11, 2018 ("Appeal Br."); the Reply Brief filed Oct. 29, 2018 ("Reply Br."); and the Examiner's Answer mailed August 28, 2018 ("Ans.") for their respective details.

ISSUES

1. Does the claimed invention recite an abstract idea?

2. Does the combination of Hildebrand and Friedlander teach or suggest receiving second information relating to one or more contextual events having an effect on the network traffic parameters, wherein the one or more contextual events are external to the network, and wherein the second information comprises an indication of a location of the one or more contextual events?

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. *See, e.g.*, *Alice Corp. PTY. Ltd. 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 at 176, 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.* 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."), 192 (citing *Benson* and *Flook*).

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 35 U.S.C. § 101. USPTO's January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance* ("Memorandum"). 84 Fed. Reg. 50.[2] Under that guidance, we first look to whether the claim recites:

[2] In response to received public comments, the Office issued further guidance on October 17, 2019, clarifying the 2019 Revised Guidance. USPTO, October 2019 Update: Subject Matter Eligibility (available at

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* 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.

ANALYSIS

Section 101 rejection

Representative claim 1 recites the following limitations:

1. A method comprising:

> receiving, by one or more computing devices, first information relating to network traffic parameters associated with a network;

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https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf) (hereinafter "84 Fed. Reg.").

> receiving, by the one or more computing devices, second information relating to one or more contextual events having an effect on the network traffic parameters, wherein the one or more contextual events are external to the network, and wherein the second information comprises an indication of a location of the one or more contextual events;
>
> correlating, by the one or more computing devices, the first information and the second information; and
>
> allocating one or more network resources based on the correlation of the first information and the second information, wherein the allocating the one or more network resources are associated with the location of the one or more contextual events.

Independent claims 10 and 15 are of commensurate scope.

These limitations, under the broadest reasonable interpretation, constitute steps to allocate network resources based upon the correlation of first information relating to network traffic parameters with second information relating to the location of contextual events external to the network, said allocating being associated with said location.

Appellant argues that the claims are directed to a specific improvement in computer-related technology. Appeal Br. 4. Appellant contends that the claimed allocation of network resources associated with the location of the one or more contextual events improves network resource management based on events external to the network. *Id.* Appellant cites *Enfish*: "[t]he Supreme Court has suggested that claims purport[ing] to improve the functioning of the computer itself, or improving an existing

technological process might not succumb to the abstract idea exception.[3] *Enfish*, 822 F.3d at 1335.

The Examiner, in the Answer, agrees with Appellant that "the cited portions of Appellant's Specification demonstrate a specific improvement, but Examiner cannot find said specific improvements within the actual claims." Ans. 7. The Examiner finds that the current claim limitations are not specific enough or significantly more to overcome the rejection, because "the terms 'correlating' and 'allocating' are very broad, and the claims do not specify how the claim limitations are used in the claimed 'correlating' of the information and." *Id.*

We do not agree with the Examiner's narrow reading of the claims. The inquiry into what the claimed invention is "directed to" applies a "stage-one filter to claims, considered in light of the Specification, based on whether their character as a whole is directed to excluded subject matter." *Enfish*, 822 F.3d at 1335, (citing *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015)). Thus, we consider the claims as a whole, in light of the Specification, to determine to what they are directed.

Appellant argues that the claims as a whole are directed to a specific improvement in managing computer network resources based on external events. Reply Br. 1. Appellant discloses that when events that can have an effect on network traffic are detected, "network resources such as processing allocation and bandwidth can be predictively adjusted to accommodate the increased call flows." Spec. ¶ 8. Appellant further discloses that "normal calling patterns or historical calling patterns can be used to correlate the

[3] *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016).

increase in volume of calls to/from the lower Manhattan area with the news and keywords obtained from" a news headline such as "Fire in Brooklyn Building." Spec. ¶ 25. "A predictor (e.g., traffic impact increase percentage) can be generated based on the searchable words such as location, news source, readership levels, and content type." *Id.* Contextual information can relate to one or more contextual events having a current or predicted effect on the network traffic parameters, and can comprise "one or more of a call detail record, weather information, E911 information, website information, emergency broadcast information, video feed, news feed, and geological information source. The contextual information can be classified and/or filtered based on various metrics or metadata such as location, source identifier, readership level, and content type." Spec. ¶ 37.

We determine that the claimed invention, read in light of the Specification, is directed to correlating (i.e., observing or determining a mutual relationship or connection between) first information relating to network traffic parameters on one hand, and second information relating to the location of one or more contextual events external to the network, on the other hand. Network resources are allocated (i.e., distributed for a particular purpose) based on this correlation, said allocation of network resources being associated with the location of the one or more contextual events. As a result, we agree with Appellant that the invention is directed to a specific improvement in managing computer network resources based on external events.

At Step 2A, prong one, of the Memorandum, we determine that claim 1 does not recite an abstract idea. Therefore, our analysis stops. Moreover, in applying the holding in *Enfish*, we determine that the claimed invention is

not directed to an abstract idea. Accordingly, we do not sustain the Examiner's 35 U.S.C. § 101 rejection of claims 1–22.

35 U.S.C. § 103 Rejection over Hildebrand and Friedlander

The Examiner finds that Hildebrand teaches receiving second information relating to one or more contextual events having an effect on the network traffic parameters, wherein the one or more contextual events are external to the network. Final Act. 6. The Examiner finds that Hildebrand does not teach that the second information comprises an indication of a location of the one or more contextual events, and does not teach allocating network resources associated with the location of the one or more contextual events. Final Act. 6–7. The Examiner then finds that Friedlander teaches associating the physical location of a centroid of the cluster of the communication on the network to be the approximate physical location of the event, and allocating bandwidth of the network based upon the resources and the proximity of users to the physical location of the event. Final Act. 7.

We do not agree with the Examiner that the combination of Hildebrand and Friedlander teaches or suggests receiving information relating to contextual events, external to the network, comprising an indication of a location of said contextual events, as is claimed. Hildebrand teaches meeting a surge in network traffic by allocating network resources. Hildebrand ¶ 48. Hildebrand teaches that this "policy response could factor in the geographic position of the predicted incoming requests." Hildebrand ¶ 49. Hildebrand thus teaches taking into consideration the geographic location of the *users conducting Internet search requests*, rather than the

geographic location of the *contextual event external to the network*, as claimed. *See* Reply Br. 4. Friedlander, for its part, teaches analyzing the signals on a network to determine a physical location of a centroid of the cluster of the communication on the network in order to glean the location of an event. Friedlander, Abstract. Friedlander thus examines data communication *within the network*, rather than analyzing information relating to contextual events *external to* the network, in order to determine a location requiring network resources.

The combination of Hildebrand and Friedlander thus fails to teach all the limitations of the invention recited in claims 1–22. We do not sustain the Examiner's 35 U.S.C. § 103 rejection.

CONCLUSIONS

1. The claimed invention does not recite an abstract idea.

2. The combination of Hildebrand and Friedlander does not teach or suggest receiving second information relating to one or more contextual events having an effect on the network traffic parameters, wherein the one or more contextual events are external to the network, and wherein the second information comprises an indication of a location of the one or more contextual events.

The Examiner's decision to reject claims 1–22 is reversed.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–22	101	Patent Eligible Subject Matter		1–22
1–22	103	Hildebrand and Friedlander		1–22
Overall Outcome				1–22

REVERSED