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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHRISTPHER J. DAWSON, PETER G. FINN, RICK A. HAMILTON, II, and JENNY S. LI

Appeal 2018-002816
Application 13/489,673[1]
Technology Center 3600

Before BRUCE T. WIEDER, AMEE A. SHAH, and MATTHEW S. MEYERS, *Administrative Patent Judges*.

WIEDER, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 1–20. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

CLAIMED SUBJECT MATTER

Appellants' "invention generally relates to systems and methods for data transfer and, more particularly, to systems and methods for data transfer in bandwidth sharing ad hoc networks." (Spec. ¶ 2.)

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[1] According to Appellants, the real party in interest is International Business Machines Corporation. (Appeal Br. 2.)

Claims 1, 8, and 15 are the independent claims on appeal. Claim 1 is illustrative and is reproduced below (paragraph numbering added):

> 1. A method, comprising:
> providing a computer infrastructure comprising a processor that operates to:
> [1] maintain, by the computer infrastructure, at least one of a borrower account associated with a bandwidth borrower and a lender account associated with a bandwidth lender of a bandwidth sharing ad hoc network; and
> [2] at least one of debit the borrower account and credit the lender account, by the computer infrastructure, based on borrowing and lending of bandwidth, respectively,
> wherein the bandwidth sharing ad hoc network is configured such that the bandwidth borrower and the bandwidth lender are in communication with a central location via wireless telephony communication protocol, the bandwidth lender is in communication with the bandwidth borrower via local wireless communication protocol, and the bandwidth lender selectively lends bandwidth to the bandwidth borrower for downloading data from or uploading data to the central location.

REJECTION

Claims 1–20 are rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

ANALYSIS

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. Section 101, however, "'contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.'" *Alice Corp. Pty. Ltd. v.*

CLS Bank Int'l, 573 U.S. 208, 216 (2014) (quoting *Assoc. for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)).

Alice applies a two-step framework, earlier set out in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012), "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 573 U.S. at 217.

Under the two-step framework, it must first be determined if "the claims at issue are directed to a patent-ineligible concept." *Id.* at 218. If the claims are determined to be directed to a patent-ineligible concept, e.g., an abstract idea, then the second step of the framework is applied to determine if "the elements of the claim . . . contain[] an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Id.* at 221 (citing *Mayo*, 566 U.S. at 72–73, 79).

With regard to step one of the *Alice* framework, we apply a "directed to" two prong test to: 1) evaluate whether the claim recites a judicial exception, and 2) if the claim recites a judicial exception, evaluate whether the claim "appl[ies], rel[ies] on, or use[s] the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception." *See 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50, 54 (Jan. 7, 2019) (hereinafter "2019 Guidance").

The Examiner determines that claim 1 is "directed to [the] [a]bstract idea of sharing bandwidth between the borrower and lender, and maintaining accounts for borrower and lender for monitoring data transfer performed by a lender for a borrower and adjusting the balance of lender's account and

borrower's account." (Final Action 3 (emphasis omitted).) The Examiner further determines that "claim 1 is not meaningfully different than those 'certain Methods of Organizing Human activity' and 'Fundamental economic practices'[] found by the courts to be abstract ideas." (*Id.*) The Examiner also determines that

> the claims recite managing the computer network resources based on the user (borrower) account that dictates the bandwidth availability, amount of data available for transfer and the rate at which the data can be downloaded or uploaded, thus amount to an abstract idea as such as [sic] receiving, storing, organizing, transmitting and modifying data.

(Answer 4–5.)

Appellants argue that "claim 1 is not directed to an abstract idea because the invention is directed to an improvement in computer-related technology." (Reply Br. 6.) In particular, Appellants argue that "[c]laim 1 recites a specific arrangement of a bandwidth sharing ad hoc network" and that it "provides . . . improvement in the technology of data transfer between computer devices." (*Id.*)

As an initial matter, we construe the claim to determine whether to give limiting effect to the wherein clause. (It is the wherein clause that recites the "specific arrangement of a bandwidth sharing ad hoc network" argued by Appellants.) With particular regard to the step of "at least one of debit[ing] the borrower account and credit[ing] the lender account . . . based on borrowing and lending of bandwidth," it is the term "the bandwidth sharing ad hoc network is configured such that . . . the bandwidth lender selectively lends bandwidth to the bandwidth borrower," in the wherein clause, that gives meaning and purpose to the step. Indeed, "steps [1 and 2] set forth in the [claim] have little meaning or utility unless they are placed

within the context . . . recited" in the wherein clause. *See Griffin v. Bertina*, 285 F.3d 1029, 1033–34 (Fed. Cir. 2002). The disclosure in the Specification that the invention relates "to systems and methods for data transfer in bandwidth sharing ad hoc networks" (Spec. ¶ 2), supports this construction. In view of the above, we determine that limiting effect should be given to the wherein clause. *See Hoffer v. Microsoft Corp.*, 405 F.3d 1326, 1330 (Fed. Cir. 2005).

Under step one of the *Alice* framework, we "look at the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter." *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (quoting *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016)).

> The "directed to" inquiry . . . cannot simply ask whether the claims *involve* a patent-ineligible concept, because essentially every routinely patent-eligible claim involving physical products and actions *involves* a law of nature and/or natural phenomenon . . . . Rather, the "directed to" inquiry 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." *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015).

Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335 (Fed. Cir. 2016). In other words, the first step of the *Alice* framework "asks whether the focus of the claims is on the specific asserted improvement in [the relevant technology] or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." *Id.* at 1335–36; *see also* 2019 Guidance at 54–55.

The Specification provides evidence as to what the claimed invention is directed. In this case, the Specification discloses that the invention relates

"to systems and methods for data transfer in bandwidth sharing ad hoc networks" (Spec. ¶ 2) and "maintaining a borrower account and lender account of a borrower and a lender of an ad hoc network" (*id.* ¶ 6). The Specification further describes the invention as "directed to systems and methods for establishing and enforcing fair-sharing strategies amongst member of bandwidth sharing ad hoc networks in which a single member of the network borrows bandwidth from other members of the network." (*Id.* ¶ 22.) Claim 1 provides further evidence. Claim 1 recites "providing a computer infrastructure . . . that operates to: maintain . . . at least one of a borrower account . . . and a lender account associated with a bandwidth lender of a bandwidth sharing ad hoc network," and "at least one of debit the borrower account and credit the lender account," "wherein the bandwidth sharing ad hoc network is configured such that the bandwidth borrower and the bandwidth lender are in communication with a central location," "the bandwidth lender is in communication with the bandwidth borrower," "and the bandwidth lender selectively lends bandwidth to the bandwidth borrower."

The claim steps of providing a processor to "maintain . . . at least one of a borrower account . . . and a lender account," "debit the borrower account," and "credit the lender account," simply use "a computer to create electronic records, [and] track multiple transactions." *See Alice*, 573 U.S. at 224. In other words, claim 1 recites the abstract idea of certain methods of organizing human activity, i.e., commercial interactions, in this case debiting and crediting borrower and lender accounts.

We next address whether the claim applies, relies on, or uses the abstract idea in a manner that imposes a meaningful limit on the abstract idea.[2]

Claim 1 provides a processor to maintain and debit/credit bandwidth borrowing and lending accounts in an ad hoc network, where the ad hoc network is configured such that the borrower and lender are in wireless communication with a central location via a wireless telephony protocol, the lender is in communication with the borrower via a local wireless communication protocol, and the lender selectively lends bandwidth to the borrower for downloading data from or uploading data to the central location.

It is well-established that merely "limiting the claims to [a] particular technological environment . . . is, without more, insufficient to transform them into patent-eligible applications of the abstract idea at their core." *Elec. Power Grp.*, 830 F.3d at 1354. Here, however, Appellants argue that claim 1 recites something more. Appellants argue that "[t]he recited bandwidth sharing ad hoc network . . . utilizes a non-conventional arrangement of particular communications protocols between different devices," and that the combination improves both the speed and efficiency

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[2] We acknowledge that some of these considerations may be more properly evaluated under step two of the *Alice* framework. However, for purposes of maintaining consistent treatment within the USPTO, we evaluate it under step one. *See* 2019 Guidance. We note that step two of the *Alice* framework has been described "as a search for an '"inventive concept"' –*i.e.*, an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Alice*, 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 72–73).

of data transfers. (Appeal Br. 11 (emphasis omitted); *see also* Reply Br. 9.) The Examiner does not directly respond to Appellants' argument. (*See* Answer 6.)

In view of the above, we determine that claim 1 is directed to a purported improvement in a particular technology, i.e., data transfer rates in a non-conventionally arranged, ad hoc network. This determination is supported by the teaching in the Specification that "[t]he invention allows a device with a relatively low bandwidth (e.g., low rate of data transfer) to leverage the bandwidth of other local devices to create a virtual high bandwidth (e.g., high rate of data transfer) connection." (Spec. ¶ 16.) It is also supported by the claim's requirements that "the bandwidth sharing ad hoc network is configured such that . . . the bandwidth lender selectively lends bandwidth to the bandwidth borrower for downloading data from or uploading data to the central location," and that the processor operates to debit/credit respective accounts "based on borrowing and lending of bandwidth."

Therefore, we also determine that while claim 1 recites a judicial exception, the claim is directed to a purported technological improvement. Thus, it uses the judicial exception in a manner that imposes a meaningful limit on the exception.

Therefore, we will reverse the rejection of claim 1 under §101. Independent claims 8 and 15 include similar language and we will also reverse the §101 rejection of those claims, and dependent claims 2–7, 9–14, and 16–20, for similar reasons.

DECISION

The Examiner's rejection of claims 1–20 under § 101 is reversed.

REVERSED