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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THOMAS A. PHELAN,
GUNASEELAN LAKSHMINARAYANAN, MICHAEL MORETTI,
JOEL BAXTER, AND LAKSHMAN CHINNAKOTLA[1]

Appeal 2017-010768
Application 14/288,506
Technology Center 2100

Before ALLEN R. MacDONALD, ROBERT E. NAPPI, and
NORMAN H. BEAMER, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1 through 16, and 21 through 24, which constitute all the claims pending in this application. Claims 17–20 have been cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] According to Appellants, the real party in interest is Bluedata Software Inc. App. Br. 2.

INVENTION

Appellants' disclosed invention is directed to providing data to large-scale processing framework nodes (LSPF) in LSPF clusters. *Abstract.* Claim 1 is representative of the invention and reproduced below.

> 1. A method to provide data to a large-scale processing framework (LSPF) node in a LSPF cluster, wherein the LSPF cluster comprises a plurality of LSPF nodes executing on one or more host computing systems, the method comprising:
>
> receiving, in a data service for the LSPF cluster, an access request from the LSPF node to access data from a data repository in accordance with a version of a distributed file system;
>
> responsive to the access request, accessing the data for the LSPF node in accordance with a different version of the distributed file system; and presenting the data to the LSPF node in accordance with the version of the distributed file system used by the LSPF node.

REJECTIONS AT ISSUE[2]

The Examiner has rejected claims 1 through 16, and 21 through 24 under 35 U.S.C. § 101 for being directed to patent-ineligible subject matter. Answer 2.

The Examiner has rejected claims 1 through 3, 5, 8 through 11, 13, 16, 21, 22, and 24 under 35 U.S.C. § 103(a) being unpatentable over Wu et al. (US 2013/0275363 A1, published Oct. 17, 2013) ("Wu"), and Hu et al. (US 2005/0253739 A1, published Nov. 17, 2005) ("Hu"). Answer 2.

[2] Throughout this Decision we refer to the Appeal Brief filed February 21, 2017, Reply Brief filed August 21, 2017, Final Office Action mailed August 4, 2016, and the Examiner's Answer mailed June 20, 2017.

The Examiner has rejected claims 4 and 12 under 35 U.S.C. § 103(a) being unpatentable over Wu, Hu, and Griffiths (US 2012/0278473 A1, published Nov. 1, 2012). Answer 2.

The Examiner has rejected claims 6, 7, 14, 15, and 23 under 35 U.S.C. § 103(a) being unpatentable over Wu, Hu, and Du et al. (US 2013/0227558 A1, published Aug. 29, 2013) ("Du"). Answer 2.

Rejection under 35 U.S.C. § 101

PRINCIPLES OF LAW

Patent-eligible subject matter is defined in § 101 of the Patent Act, which recites:

> 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.

There are, however, three judicially created exceptions to the broad categories of patent-eligible subject matter in § 101: laws of nature, natural phenomena, and abstract ideas. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012). Although an abstract idea, itself, is patent-ineligible, an application of the abstract idea may be patent-eligible. *Alice*, 134 S. Ct. at 2355. Thus, we must consider "the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Id.* (citing *Mayo*, 566 U.S. at 78–80). The claim must contain elements or a combination of elements that are "'sufficient to ensure that the

patent in practice amounts to significantly more than a patent upon the [abstract idea] itself.'" *Id.* (citing *Mayo*, 566 U.S. at 72–73).

The Supreme Court sets forth a two-part "framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Id.* at 2355.

> First, we determine whether the claims at issue are directed to one of those patent-ineligible concepts. [*Mayo*, 566 U.S. at 76–77]. If so, we then ask, "[w]hat else is there in the claims before us?" *Id.*, at [77–78]. To answer that question, we consider the elements of each claim both individually and "as an ordered combination" to determine whether the additional elements "transform the nature of the claim" into a patent-eligible application. *Id.*, at [77–78]. We have described step two of this analysis 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." *Id.*, at [71–73].

Id.

ANALYSIS

We have reviewed Appellants' arguments in the Briefs, the Examiner's rejections, and the Examiner's response to Appellants' arguments. Appellants' arguments have persuaded us of error in the Examiner's determination that the claims are directed to a patent-ineligible concept. However, we are unpersuaded of error in the Examiner's rejection under 35 U.S.C. § 103.

Appellants argue on pages 7 through 8 of the Appeal Brief and pages 2 through 3 of the Reply Brief that the Examiner has not established the claims are directed to a patent-ineligible concept. Appellants argue that independent claims 1, 9, and 21 are directed to an improvement in computer-

related technology. App. Br. 7 (citing *Enfish, LLC v. Microsoft Corp.*, 2016 WL 2756255 (May 12, 2016), *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 612 (Fed. Cir. 2016) and *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed. Cir. 2016.)). Appellants argue:

> a solution is included for data processing challenges in a largescale processing framework cluster. In particular, the claimed solution includes a data service to receive a request in accordance with a first version of a file system, access data in accordance with a second version of the file system, and present the data to the requesting node in accordance with the first version of the file system. Thus, rather than requiring the processing cluster or storage repository to be updated to a matched version, the data service may act as an intermediary to translate and provide the required data. For example, referring to claim 1, claim 1 provides, "responsive to the access request, accessing the data for the LSPF node in accordance with a different version of the distributed file system; and presenting the data to the LSPF node in accordance with the version of the distributed file system used by the LSPF node." Accordingly, because the claims are directed at a specific and novel operation for accessing data, which is a challenge particular to large-scale data processing, the Appellant asserts that the claims are not directed to an abstract idea.

App. Br. 7.

The Examiner, in response to Appellants' augments finds that the claims are similar to those at issue in *Electric Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016). Answer 3–4. The Examiner finds that the claims are not similar to those in *Enfish* as "the claims are directed to the abstract idea of requesting, retrieving, and returning data between two systems of different or incompatible file systems." Answer 4–5. The Examiner provides a similar response with respect to *TLI* and *McRO*.

We disagree with the Examiner's finding that the claims are directed to an abstract idea. Our reviewing court has said:

> We applied the distinction to reject the § 101 challenge at stage one because the claims at issue focused not on asserted advances in uses to which existing computer capabilities could be put, but on a specific improvement—a particular database technique—in how computers could carry out one of their basic functions of storage and retrieval of data.

Electric Power Group, *at* 1354 (citing *Enfish)*. We concur with Appellants, that the claimed features of receiving an access request from a data repository in accordance with a (first) version of a distributed file system, accessing the requested data in accordance with a different version of the distributed file system and presenting the information in accordance with the (first) version of the distributed are directed to a technical improvement in the communication between computers. Thus, we disagree with the Examiner's finding that the claims are directed to an abstract idea.

Rejection under 35 U.S.C. § 103

Appellants argue on pages 8 through 10 of the Appeal Brief, and pages 4 and 5 of the Reply Brief that the Examiner's obviousness rejection is in error. Specifically, Appellants' arguments are directed to three points, whether the combination of Wu and Hu do not teach: a) an access request to access data in a data repository in accordance with a version of a distributed file system, and accessing the data in accordance with a different version of the distributed system; b) receiving a request from a node in a LSPF system; and c) presenting the data to an LSPF node in accordance with the version of distributed file system used by the LSPF node.

With respect to the first two points, the Examiner finds that Wu's datahub server equates to the claimed data source, a Haddoop node as the claimed LSPF node and the heterogeneous data sources with the data repository. Answer 9–10 (*see e.g.*, Wu Fig. 2). Based upon this mapping the Examiner finds that Wu teaches the claimed feature of receiving at a data service a request from the LSPF node to access data. Answer 9. With regard to the limitations directed to the version of the distributed file system, the Examiner states:

> the datahub server downloads data from the heterogeneous data sources. The data sources store data using different data schemas (i.e., a different version of the distributed file system). Wu at para. 0018. Therefore, the datahub server accesses the data in accordance with the different data schemas of the data sources (i.e., a different version of the distributed file system). Wu at para. 0027.
>
> In response to Appellant's allegation that Wu fails to disclose that a request is ever translated to a second version of a distributed file system (Brief at 9), the Examiner respectfully disagrees. The limitation does not require that the access request be translated. The limitation only requires that the data be accessed in accordance with the different version of the distributed file system. The accessing of the data can be interpreted to be a new access request in accordance with the different version of the distributed file system, which retrieves the data that is subsequently transformed to a schema in accordance with the initial version of the distributed file system. Given this interpretation, Wu discloses the retrieved data (i.e., accessing the data for the LSPF node) goes from different versions (i.e., different version of the distributed file system) into a common schema where the version heterogeneity is reconciled in the mappers of the map-reduce jobs performed by the Hadoop cluster nodes. Wu at paras. 0065-66. In other words, the different versions of data are translated to the common version for processing by the Hadoop node.

Answer 10–11.

We have reviewed the teachings of Wu and concur with the Examiner. We are not persuaded by Appellants' arguments that the schemas of Wu are not equivalent to the claimed file system version App. Br. 8, Reply Br. 4–5. Neither Appellants' arguments nor Appellants' Specification provide a definition of the claimed version of the distributed file system, which differentiates over the schemas discussed in Wu. Thus, Appellants' arguments directed to the first two points have not persuaded us of error in the Examiner's rejection of representative claim 1.

With respect to the third point of Appellants' argument, the Examiner finds that Wu discloses a Hadoop node of a Hadoop cluster (which meets the claimed LSPF node in an LSPF cluster) but does not teach the data is presented to the node in the schema used by the Hadoop node. Answer 11. The Examiner finds that Hu teaches a data source that responds to a query in the schema of the request. Answer 12 (citing Hu's teaching in paragraph 41 of converting data from a common format into the schema of the target database before it is returned in response to a query).

We concur with the Examiner's findings. Appellants' arguments directed to this point, assert that Hue does not teach data provided to a processing node and does not teach a distributed file system as claimed. App. Br. 10. We are not persuaded of error by these arguments, the Examiner has shown that Wu teaches the limitations directed to the nodes of a distributed file system and cites Hu for the teaching of presentation of a response in accordance with the requestor's schema. According, Appellants' arguments directed to the third point have not persuaded us of error in the

Examiner's rejection of representative claim 1. Accordingly, we sustain the Examiner's rejection of claims 1 through 3, 5, 8 through 11, 13, 16, 21, 22, and 24 grouped together with claim 1.

With respect to the Examiner's rejections of claims 4, 6, 7, 12, 14, 15, and 23, Appellants argue the additional reference cited by the Examiner do not overcome the deficiencies in the rejection of claim 1. App. Br. 10–11. As discussed above we are not persuaded of error in the Examiner's rejection of claim 1, accordingly we sustain the Examiner's rejection of claims 4, 6, 7, 12, 14, 15, and 23 for the same reasons as claim 1.

DECISION

We reverse the Examiner's rejections of claims 1 through 16, and 21 through 24 under 35 U.S.C. § 101.

We affirm the Examiner's rejections of 1 through 16, and 21 through 24 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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED