UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/571,643	12/16/2014	Thomas A. Phelan	90737902	9542

56436	7590	09/30/2020

Hewlett Packard Enterprise
3404 E. Harmony Road
Mail Stop 79
Fort Collins, CO 80528

EXAMINER
VU, TUAN A

ART UNIT	PAPER NUMBER
2193	

NOTIFICATION DATE	DELIVERY MODE
09/30/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chris.mania@hpe.com
hpe.ip.mail@hpe.com

UNITED STATES PATENT AND TRADEMARK OFFICE
_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD
_____

Ex parte THOMAS A. PHELAN, MICHAEL J. MORETTI, JOEL
BAXTER, and GUNASEELAN LAKSHMINARAYANAN
_____

Appeal 2019-003990
Application No. 14/571,643[1]
Technology Center 2100
_____

Before MARC S. HOFF, JOHN D. HAMANN, and
STEVEN M. AMUNDSON, *Administrative Patent Judges*.

HOFF, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a Final Rejection of
claims 1–4, 6–14, and 16–21.[2] We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

Appellants' invention is a system and method for facilitating serving
of data requests based on quality of service assigned to processing jobs. The
method includes identifying a plurality of data requests from a plurality of

---

[1] Appellants state that the real party in interest is Bluedata Software, Inc.
Appeal Br. 2.
[2] Claims 5 and 15 have been cancelled.

processing jobs, prioritizing the data requests based on a quality of service assessed to each of the plurality of jobs, and assigning cache memory in the computer system to each of the plurality of data requests based on the prioritization. Abstract.

Claim 1 is reproduced below:

> A method of prioritizing data requests in a host computing system executing a plurality of virtual machines, the method comprising:
>
> identifying, in a cache service executing on the host computing system and shared by the plurality of virtual machines, a plurality of data requests from a plurality of large scale data processing framework (LSPF) jobs that are each executing on two or more virtual machines in the plurality of virtual machines;
>
> in the cache service, prioritizing the plurality of data requests based on a quality of service assessed to each of the plurality of LSPF jobs; and
>
> in the cache service, assigning cache memory of the host computing system to each of the plurality of data requests based on the prioritization, wherein the cache memory comprises shared memory locations accessible on the host computing system by the plurality of LSPF jobs.

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

Name	Reference	Date
Amiri	US Pat. Pub. 2004/0230753 A1	Nov. 18, 2004
Illikkal	US Pat. Pub. 2008/0250415 A1	Oct. 9, 2008
Iyer	US Pat. Pub. 2009/0172315 A1	July 2, 2009
Chambliss	US Pat. Pub. 2013/0074087 A1	Mar. 21, 2013
Yang	US Pat. Pub. 2014/0156965 A1	June 5, 2014
Nishtala	US Pat. Pub. 2014/0195770 A1	July 10, 2014
Yeager	US Pat. Pub. 2014/0195686 A1	July 10, 2014
Quimbey	US Pat. Pub. 2015/0143053 A1	May 21, 2015
Jing Zhang et al., *A Distributed Cache for Hadoop Distributed File System in Real-time Cloud Services*, ACM/IEEE 13th International Conference on Grid Computing (2012) ("Zhang")		

Claims 1, 2, 4, 6, 8–10, 12–14, and 17–21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nishtala, Illikkal, Yeager, Iyer, Quimbey, and Zhang.

Claims 3 and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nishtala, Illikkal, Yeager, Iyer, Quimbey, Zhang, Amiri, and Yang.

Claims 7 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nishtala, Illikkal, Yeager, Iyer, Quimbey, Zhang, and Chambliss.

Throughout this decision, we make reference to the Appeal Brief ("App. Br.," filed Dec. 20, 2018), the Reply Brief ("Reply Br.," filed April 26, 2019), and the Examiner's Answer ("Ans.," mailed Feb. 26, 2019) for their respective details.

ISSUE

Does the combination of Nishtala, Iyer, Yeager, Iyer, Quimbey, and Zhang teach or suggest identifying a plurality of data requests from a

plurality of large scale data processing framework jobs that are each executing on two or more virtual machines?

ANALYSIS

Claims 1, 2, 4, 6, 8–10, 12–14, and 17–21

Independent claims 1, 9, and 18 each recite, in pertinent part, identifying a plurality of data requests from a plurality of large scale data processing framework (LSPF) jobs that are each executing on two or more virtual machines.

The Examiner finds that Nishtala teaches this limitation. Final Act. 4. Nishtala teaches a serial attached storage (SAS) drive system including a plurality of servers 110. Nishtala teaches that a server may be a virtual machine configured to perform server operations, and/or that a server "may be configured to host any number of virtual machines." Nishtala ¶ 23.

We find that the Examiner erred. The Examiner does not identify teaching in Nishtala of any job(s) that are each executing on two or more virtual machines. *See* Reply Br. 2. The Examiner does not identify teaching in Nishtala of large scale data processing framework (LSPF) jobs executing on the system. *See* Reply Br. 3.

To the extent the Examiner finds that Zhang teaches identifying data requests from a plurality of jobs that are each executing on two or more virtual machines, we have reviewed Zhang and we find that Zhang also does not teach this limitation of the claimed invention.

Thus, we find that the Examiner's combination of Nishtala, Illikkal, Yeager, Iyer, Quimbey, and Zhang fails to teach or suggest all the limitations of the invention recited in claims 1, 2, 4, 6, 8–10, 12–14, and 17–21. We do not sustain the Examiner's § 103 rejection of these claims.

Claims 3 and 11

Claims 3 and 11 depend from independent claims 1 and 9, respectively, whose rejection we do not sustain, *supra*. The Examiner does not provide evidence that Amiri or Yang remedy the deficiencies of the combination of references asserted against claims 1 and 9. Accordingly, we do not sustain the Examiner's rejection of claims 3 and 11, for the reasons expressed *supra* with respect to claims 1 and 9.

Claims 7 and 16

Claims 7 and 16 depend from independent claims 1 and 9, respectively, whose rejection we do not sustain, *supra*. The Examiner does not provide evidence that Chambliss remedies the deficiencies of the combination of references asserted against claims 1 and 9. Accordingly, we do not sustain the Examiner's rejection of claims 7 and 16, for the reasons expressed *supra* with respect to claims 1 and 9.

CONCLUSION

The combination of Nishtala, Illikkal, Yeager, Iyer, Quimbey, and Zhang does not teach or suggest identifying a plurality of data requests from a plurality of large scale data processing framework jobs that are each executing on two or more virtual machines.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
1, 2, 4, 6, 8–10, 12–14, 17–21	103	Nishtala, Illikkal, Yeager, Iyer, Quimbey, Zhang		1, 2, 4, 6, 8–10, 12–14, 17–21
3, 11	103	Nishtala, Illikkal, Yeager, Iyer, Quimbey, Zhang, Amiri, Yang		3, 11
7, 16	103	Nishtala, Illikkal, Yeager, Iyer, Quimbey, Zhang, Chambliss		7, 16
Overall Outcome				1–4, 6–14, 16–21

ORDER

The Examiner's decision to reject claims 1–4, 6–14, and 16–21 is reversed.

REVERSED