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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte COLIN SIDI, STEPHEN S. HASKELL, ABHIJIT NAIK, and DEEPAK RATHI

Appeal 2019-000920
Application 13/787,124[1]
Technology Center 2400

Before ALLEN R. MacDONALD, JON M. JURGOVAN, and KEVIN C. TROCK, *Administrative Patent Judges*.

JURGOVAN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant seeks review under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–9 and 21–23, constituting all of the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.[2]

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[1] We use the word "Appellant" to refer to "applicant" as defined in 37 C.F.R. § 1.42. According to Appellant, the real party in interest is W. W. Grainger, Inc. Appeal Br. 2.

[2] Our Decision refers to the Specification ("Spec.") filed March 6, 2013, the Final Office Action ("Final Act.") mailed March 8, 2018, the Appeal Brief ("Appeal Br.") filed June 26, 2018, the Examiner's Answer ("Ans.") mailed September 21, 2018, and the Reply Brief ("Reply Br.") filed November 14,

CLAIMED INVENTION

The claims are directed to providing infrastructure metrics for components of a monitored system. Spec. 21. Data for user applications and operating systems are aggregated into transactional and non-transactional data streams correlated on a common time scale for graphical display to a user for further analysis. *Id.*

Claim 1 is independent. Claims 2–9 and 21–23 depend from claim 1. Claim 1 is reproduced below:

> 1. A non-transient, computer readable media having stored thereon instructions for providing infrastructure metrics for components of a monitored system the instructions performing steps comprising:
>
> obtaining, and storing in a data repository in a user impact data log, data indicative of individual application response times resulting from user interactions with each one of a plurality of applications running on a network system and data indicative of network response times;
>
> obtaining, and storing in a data repository in an operating system statistics log, data indicative of operating system usage of system resources for each operating system running the the[3] plurality of applications running on a network system;
>
> aggregating data in the user impact data log and data in the operating system statistics log into a raw data log;
>
> bifurcating the raw data log into at least a transactional data stream and a non-transactional data stream;
>
> correlating at least one of the transactional data stream and the non-transactional data stream together with the data within the operating system log onto a common time scale; and
>
> using the common time scale to display the at least one of the transactional data stream and the non-transactional data

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2018.

[3] The Examiner is advised to consider whether two occurrences of the word "the" is in compliance with 35 U.S.C. § 112.

> stream that was correlated together with the data within the operating system log on a display in a graphical format.

Appeal Br. 14 (Claims Appendix 1).

REJECTIONS

(1) Claims 1, 2, 6, and 21–23 stand rejected under 35 U.S.C. § 103 over Saghier (US 7,369,981 B1, May 6, 2008), Peles (US 2006/0029016 A1, February 9, 2006) and Williams (US 2014/0019609 A1, January 16, 2014). Final Act. 4–9.

(2) Claim 7 stands rejected under 35 U.S.C. § 103 based on Saghier, Peles, Williams and Breslin (US 7,827,448 B1, November 2, 2010). Final Act. 10.

(3) Claims 3–5, 8 and 9 stand rejected under 35 U.S.C. § 103 based on Saghier, Peles, Williams and Jones (US 2005/0091369, April 28, 2005). Final Act. 10–13.

ANALYSIS

§ 103 Rejections

A patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc*., 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art;

(3) the level of ordinary skill in the art; and (4) where present, objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

Claim 1

Individual Application Response Times

The Examiner finds that Saghier teaches claim 1's limitation reciting "obtaining, and storing in a data repository in a user impact data log, data indicative of individual application response times resulting from user interactions with each one of a plurality of applications running on a network system." Appeal Br. 14 (Claims Appendix); Final Act. 5; Saghier 2:30–32, 2:56–66, 4:66–67.

Appellant argues that Saghier does not describe this limitation of claim 1 as follows:

> Turning to the rejection, it is first respectfully submitted that the relied upon and cited to disclosure within Saghier generally directed to "determining correlation factors between the performance data and the transactions data for a common time period" and "correlation values may be calculated based on computer performance and transactions information" (OA, pg. 5)(emphasis added) **does not expressly describe** obtaining and storing in a data repository in a user impact data log data indicative of *individual application response times resulting from user interactions with each one of a plurality of applications running on a network* as claimed.

Appeal Br. 5.

At the outset, we note that merely quoting and emphasizing certain claim language and asserting it is different from a prior art reference is insufficient to constitute an argument. *See* 37 C.F.R. § 41.37(c)(1)(iv) ("The arguments shall explain *why* the examiner erred as to each ground of rejection contested by appellant" (emphasis added)). Furthermore, "[i]t is

not the function of [the Board] to examine the claims in greater detail than argued by an appellant, looking for [patentable] distinctions over the prior art.*"* *In re Baxter Travenol Labs.*, 952 F.2d 388, 391 (Fed. Cir. 1991). Similar deficiencies are present in subsequent arguments as well.

Nonetheless, Appellant argues Saghier does not "expressly describe" the argued claim limitation. Appeal Br. 5. In the obviousness analysis, however, it is not necessary that the combined references "expressly describe" the claimed invention, only that they teach or suggest it. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Appellant's argument fails to apply the proper standard for the obviousness analysis here and in subsequent arguments.

To the extent Appellant's statement could be considered an argument, we note that Saghier explains the problem solved by its invention as follows:

> In today's world, numerous computers are dispersed throughout many networks covering a range of applications and activities. The expectation is that these computers are always working to provide the response time as defined in contracted service level agreements. Unfortunately, users and application executions are increasing at an alarming rate placing enormous burdens on system resources. A challenge has become a battle to keep pace with these demands by checking and maintaining computers very often to insure that they can handle the capacity needs placed upon them by the ever increasing number of users and demand for executing more applications.

Saghier 1:56–67. Thus, Saghier teaches determining response time is important to meeting response times contracted in service level agreements in connection with executing applications.

Saghier further teaches the following:

> The system includes a computer operable to execute applications, to operate computing hardware, [and] to generate performance data on the applications and computing hardware.

Ans. 4; Saghier 2:52–56 (emphasis added). Thus, Saghier teaches gathering performance data on applications. Putting these teachings together, Saghier at least suggests performance data may include individual application response times for each of multiple applications. Appellant fails to explain why these Saghier disclosures do not teach, or at least suggest, the argued claim limitation.

In any case, even if Saghier failed to teach or suggest the claimed limitation, Peles teaches determining individual application response times for each of multiple applications. Peles ¶¶ 3, 25.

Operating System Usage

The Examiner finds Saghier teaches claim 1's limitation reciting "obtaining, and storing in a data repository in an operating system statistics log, data indicative of operating system usage of system resources for each operating system running the plurality of applications running on a network system." Appeal Br. 14 (Claims Appendix); Final Act. 5; Saghier 4:44–46, 5:6–9, 6:31–34.

Appellant argues against the Examiner's finding as follows:

> It is also respectfully submitted that the relied upon and cited to disclosure within Saghier generally directed to "computer performance data may include a variety of functions that measure various performance aspects of computer 310 to provide an indication of **the computer's** performance ability" (OA, pg. 5)(emphasis added) **does not expressly describe** obtaining, and storing in a data repository in an operating system statistics log, data indicative of operating system usage of system

> resources for *each operating system running the plurality of applications running on a network system* as claimed.

Appeal Br. 6.

As noted, Saghier teaches that its system "generate[s] performance data on the applications and computing hardware." Final Act. 5; Saghier 2:54–55. Saghier further teaches that the "[e]xemplary performance data includes central processing unit (CPU) utilization (including multiple processors or systems), input/ output (I/O) utilization, memory utilization, disk-access utilization, and packet-rate utilization" (emphasis added). Ans. 5; Saghier 4:40–44.

> We further note that an "operating system" is defined as follows:
>
> operating system n. The software that controls the allocation and usage of hardware resources such as memory, central processing unit (CPU) time, disk space, and peripheral devices. The operating system is the foundation software on which applications depend. Popular operating systems include Windows 98, Windows NT, Mac OS, and UNIX.

Operating System, Microsoft Computer Dictionary (5th Ed. 2002), p. 378. This definition of "operating system" shows that a person of ordinary skill in the art would have understood that the performance data that Saghier gathers (CPU, I/O, Memory, and disk-access utilization) pertains to the activities of an operating system, which collectively amount to CPU usage. Saghier 4:40–44. Furthermore, Saghier teaches CPU utilization may cover multiple processors or systems. *Id.* Combining these Saghier disclosures, we are not persuaded the Examiner erred in finding that Saghier teaches, or at least suggests, the claimed feature of obtaining performance data for each operating system running applications in a network system.

Aggregating Data

The Examiner found that Peles teaches claim 1's limitation of "aggregating data in the user impact data log and data in the operating system statistics log into a raw data log." Final Act. 6; Ans. 5–6; Peles ¶¶ 3, 10, 23; *see also* Williams ¶¶ 78, 83.

Appellant argues against Peles as follows:

> Turning now to Peles, while Peles *generally* describes in relied upon and cited to paragraph 10 that stations may collect statistics about equipment responsiveness, its CPU load and networking load to thereby recognize failures of equipment, relied upon and cited to paragraph 10 **does not expressly describe** aggregating data, i.e., forming a whole by combining several disparate types of data, let alone **expressly describe** *aggregating* data in a user impact data log and data in the operating system statistics log *into a raw data log* as claimed.

Appeal Br. 7.

We agree with the Examiner's finding that Peles teaches, or at least suggests, the claimed "aggregating" limitation. Final Act. 4, 6–7; Ans. 5–6. Peles teaches "gathering of statistics about the application usage and the resource activity." Peles ¶ 23. Peles also teaches that "resources" include "operating system resources of the server." Peles ¶ 30. Accordingly, the Examiner finds Peles's "application usage" is equivalent to the claimed "data in the user impact data log" and Peles's "resource activity" is equivalent to the claimed "data in the operating system statistics log." Ans. 5. Peles's "application usage" and "resource activity" are logged as collective statistics in logging servers. Peles ¶ 35. Putting these teachings together, we agree with the Examiner's finding that Peles teaches, or at least suggests, the claimed limitation.

Motivation to Combine Saghier with Peles

The Examiner finds one of ordinary skill in the art would have combined Saghier and Peles "to clarify that the stored data includes network response time" and because "it would have been beneficial to monitor network response time and application response time." Final Act. 7; Peles ¶ 3.

Appellant argues that the Examiner used circular reasoning to modify Saghier "to clarify the stored data include[s] a network response time" because it "would have been beneficial to monitoring network response time." Appeal Br. 9. Appellant contends this is impermissible hindsight reasoning. *Id.*

We do not agree with Appellant's argument. Saghier teaches that its system overcomes a problem in the prior art that computers in networks must be checked and maintained very often to ensure they can provide response times defined in service level agreements. Saghier 1:56–67. To this end, Saghier teaches a system that can forecast computer capacity by gathering and analyzing performance data and transaction data. *Id.* at code [57], 2:28–30. Saghier further teaches the performance data may include packet-rate utilization, which is information that relates to the transfer and size of information. *Id.* at 4:40–44, 6:53–55. Peles explicitly teaches the claimed "data indicative of network response times." Final Act. 6; Ans. 6; Peles ¶ 3. As both Saghier and Peles are concerned with determining response times in computer networks, we agree with the Examiner there was motivation to combine the references, particularly because one of ordinary skill would have recognized that network response times may be a significant cause of delay in addition to application response times and

would need to be taken into account to address response times under service level agreements. Thus, one of ordinary skill in the art would have understood the desirability of combining Peles's "data indicating of network response time" with Saghier.

Motivation to Combine Saghier and Peles with Williams

The Examiner determined that one of ordinary skill in the art would have combined Williams with "Saghier and Peles for filtering data into transactional and non-transactional and display the data on a graphical format." Final Act. 7. The Examiner further determined "[i]t would have been beneficial [to] identify that the type of network may include transactional traffic and/or non-transactional traffic and providing the graphical display including application components (machines, clients, processes, etc.) and the relationships of data." *Id.*; Williams ¶ 111.

Appellant argues the Examiner used circular reasoning amounting to impermissible hindsight in concluding that it would have been obvious to modify Saghier and Peles with Williams' teaching of filtering data into transactional and non-transactional data and displaying the data in graphical format because such filtering would be beneficial. Appeal Br. 10; Reply Br. 5.

We do not agree with Appellant's argument. Williams teaches:

> As described above, the collector application and/or module **200** generates performance data or metrics related to and/or indicative of the health of the network. The health data processing application and/or module **100** may be operable to receive metric data from multiple collectors **200,** as illustrated in FIG. **la**. Large numbers of metrics about a distributed application may be collected, including user-visible performance metrics such as transactions per second and latency of transactions as well as infrastructure metrics relating to CPU, memory, and disk

> load. To understand the health of an application, users presented with these numerous metrics may desire to classify network traffic types, such as transactional traffic and/or non-transactional traffic. Additionally, metrics relevant to the health of the application may be identified. As such, it may be advantageous to filter network traffic that includes a mixture of transactional and non-transactional traffic.

Williams ¶ 144. Accordingly, Williams teaches that it may be desirable to classify network traffic types as transactional and/or non-transactional for presentation to users in order to understand the health of an application. *Id.* Thus, we agree with the Examiner that one of ordinary skill in the art would have understood that adding Williams' classification of network traffic as transactional or non-transactional to the combination of Saghier and Peles would have been beneficial to understanding the health of applications running in the system. Final Act. 7.

Conclusion for Claim 1

To sustain a rejection on obviousness, "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 550 U.S. at 418. We conclude the Examiner provided sufficient reasoning and underpinning to support the conclusion of obviousness for claim 1.

Claim 3

Claim 3 depends from claim 1 and recites "an early warning system comprising at least one process to determine when the at least one of the transactional data stream and the non-transactional data stream and the data within the operating system statistics log indicate at least one of a current or future anomaly." Appeal Br. 15 (Claims Appendix).

The Examiner finds that the combination of Saghier, Peles, Williams and Jones teaches the limitations of claim 3. Final Act. 10–11; Jones ¶¶ 7, 51.

Appellant argues Jones pertains to determining a warning status for data storage devices, and thus does not expressly describe an early warning system that determines when transactional and non-transactional data streams indicate a current or future anomaly. Appeal Br. 12; Reply Br. 6–7.

Appellant's argument is an attack on Jones alone without considering its combination with Saghier, Peles, and Williams. "Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references." *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (citing *In re Keller*, 642 F.2d 413, 425 (CCPA 1981)). Specifically, the Examiner relies on Saghier and Peles to teach various monitored devices, including memory and disks (i.e., data storage devices), and on Williams to teach filtering data into transactional and non-transactional data. Final Act. 5–7; Saghier 4:40–44; Peles ¶ 10; Williams ¶ 144. The Examiner applies Jones' teaching of an early warning system to indicate anomalies in Williams' transactional data and non-transactional data. Final Act. 10–11; Jones ¶¶ 7, 51. Thus, Appellant's argument against Jones alone fails to address how the Examiner applied the references in the rejection. Accordingly, we do not find Appellant's argument persuasive to show Examiner error.

Claim 21

Claim 21 depends from claim 1 and recites "wherein data in the user impact data log and data in the operating system statistics log are aggregated

into a raw data log on an individual user basis." Appeal Br. 16 (Claims Appendix).

The Examiner finds that Peles teaches claim 21's limitation. Final Act. 8; Peles ¶¶ 3, 30.

Appellant argues that Peles "**does not expressly describe** data in the user impact data log and data in the operating system statistics log being aggregated into a raw data log on an individual user basis." Appeal Br. 10–11.

We do not agree with Appellant's argument. Peles states the following:

> The response time is a combination of the network response time and the application response time. The application debugging switch holds multiple measurement classes. Each class defines different sources or destinations of traffic (IP addresses and networks) and different applications (TCP/UDP ports or content identifiers in the requests). Collecting the response time for each class separately allows zooming in to an application and user that experience bad service and detect the reason for their failure.

Peles, code [57] (emphases added); *see also* ¶¶ 25, 35. Thus, Peles teaches the ability to "zoom in" to classes of response times affecting an individual user to determine the reason for experiencing bad service. Among the classes of response time are those for Peles's "application usage" and "resource activity" logged as collective statistics in logging servers. Peles ¶ 35. When both the application response time and CPU response time contribute to a user experiencing bad service, the raw data representing these response times is in some sense "aggregated into a raw data log on an individual user basis." Appellant does not explain why these Peles' disclosures do not teach, or at least suggest, claim 21's limitation.

Accordingly, we do not find Appellant's argument persuasive to show Examiner error.

Remaining Claims

No separate arguments are presented for the remaining claims. Accordingly, we sustain the Examiner's rejections of these claims for the reasons stated for the claims from which they depend. *See* 37 C.F.R. § 31.47(c)(1)(iv).

CONCLUSION

The Examiner's rejections of claims 1–9 and 21–23 under 35 U.S.C. § 103 are affirmed.

Claims Rejected	**35 U.S.C. §**	**References**	**Affirmed**	**Reversed**
1, 2, 6, 21–23	103	Saghier, Peles, Williams	1, 2, 6, 21–23	
7	103	Saghier, Peles, Williams, Breslin	7	
3–5, 8, 9	103	Saghier, Peles, Williams, Jones	3–5, 8, 9	
Overall Outcome			1–9, 21–23	

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).

AFFIRMED