

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BRIGHT DATA LTD.,

Petitioner

v.

OXYLABS, UAB,
Patent Owner

Case IPR2023-00840
Patent No. 10,965,770

DECLARATION OF JAMES OLIVIER, Ph.D

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I. INTRODUCTION

1. My name is James L. Olivier, Ph.D. I have been retained by Oxylabs Lt, Uab as an independent expert in the relevant art.

II. PROFESSIONAL BACKGROUND

2. I have a Ph.D. from The Ohio State University in Electrical Engineering with minors in Discrete Mathematics, Computer Science, and Microelectronics. I have published papers in the areas of coding theory and multiprocessor computer systems. I received my Bachelor of Science degree from Ohio State University in 1983. My CV is attached hereto as Appendix A, which shows my education and experience in more detail.

3. I have extensive experience in the design and development of telecommunication systems and have specialized experience in network product development.

4. I have developed and designed equipment for cellular networks since I first joined AT&T Bell Laboratories in 1990. From 1990 to 2005 I also designed and implemented a variety of telecommunication systems, including Asynchronous Transfer Mode (“ATM”) based systems for use in cellular networks. ATM is a broadband, packet-switched telecommunications standard defined by the American National Standards Institute (“ANSI”) and the International Telecommunication Union (“ITU”). I also participated in the design and development of AT&T

Autoplex Series base stations. I also participated in the design and development of AT&T's Network Control Points, "NCPs" which were massive network databases containing subscription information for customers. During this time, I first began my work with telecommunication standards bodies as a contributing member of the ATM Forum.

5. In 1995, I transitioned to the Digital Switch Corporation ("DSC") Switch Products Division and was the Senior Manager of the ATM systems engineering group developing ATM packet switches for a new generation base station for use by Motorola in their Centralized Base Station Controller, a core part of the second generation cellular network. Later, as Senior Manager for Intelligent Networks, I designed and developed a video residential gateway which was presented at SuperComm 1996.

6. I next worked at Samsung Telecommunications America from 1996 to 1999 as a Principal Engineer for Samsung's next generation wireless broadband switching system over the Universal Mobile Telecommunications System ("UMTS"). UMTS is a third-generation ("3G") broadband standard developed by the 3rd Generation Partnership Project ("3GPP"). My work at Samsung included designing their next generation UMTS cellular switch, which provided both packet and voice services, such as telephony services, wireless services, broadband services, and Internet services. While at Samsung, I also served as Samsung's North

American corporate representative to the ITU, which is the agency of the United Nations responsible for facilitating interconnectivity of information and communication technologies worldwide. The ITU participated in the 3GPP under the ITU's International Mobile Telecommunications 2000 effort. It was there that I participated in the development of standards for advanced wireless networks.

7. After that, I worked for Marconi Communications from 1999 to 2002, where I was responsible for design and development of a number of systems for the access market, including Digital Subscriber Line ("DSL") modems, along with the design of point-to-point wireless systems. I was also responsible for the servers for the Network Management System for the North American Access product division, which provide service provisioning for DSL customers. It was here where I architected a triple play residential gateway which provided voice, video and data to residential subscribers.

8. I joined Navini Networks in 2002 as a Senior Manager. The Navini system was an entirely packet-based cellular system. I was responsible for layer 2 and layer 3 network protocols for Navini's Wideband Code Division Multiple Access ("WCDMA") wireless base stations and broadband modems. These layers were responsible for packet transmissions for various services over the WCDMA air interface. I also developed network-based servers and databases for network authentication, network services, service provisioning and subscriber management

for the Navini's Worldwide Interoperability for Microwave Access 'WiMAX' Network.

9. I have been the owner of Olivier Consulting since 2003 and have provided consulting services to various companies to develop networking systems and on intellectual property matters, including many such matters relating to networking technologies specifically.

10. I am currently a research professor at the Hunt Institute for Engineering and Humanity, which is part of the Lyle School of Engineering at Southern Methodist University in Dallas, Texas. Here, I serve as the Program Lead for Transformational Technology. As Program Lead, I am responsible for the Maps4Good project which uses SMU's data center servers to provide web-based services for the community, such as a COVID Relief Map.

11. I am also currently an Adjunct Professor in the Telecommunications and Network Engineering Program at Southern Methodist University's Graduate School of Electrical Engineering, where I teach classes in networking and networked enabled applications.

12. Overall, I have over 20 years of experience in advanced network engineering and product development. I have been recognized expert by the International Trade Commission ("ITC") in security and firewalls in routers and switches, cellphone hardware and software for imaging, operating systems for

mobile devices, mobile devices hardware and software architectures, and ethernet switch packet processor hardware and software.

13. I have also opined on the meaning of claim terms to one of ordinary skill in the art on numerous occasions. For example, I provided opinions on the meanings of claim terms in QPSX Developments 5 Pty Ltd. v. Nortel Networks, Inc and In the Matter of Certain Wireless Devices, Including Mobile Phone and Tablets II, USITC Inv. No. 337-TA-905.

14. My CV, which I understand is being submitted with this declaration, includes a listing of patents applications on which I am an inventor.

15. Because of my background, training, and experience, I am qualified as an expert to explain the background of the technology encompassed by the '826 Patent as well as to opine on the validity of the claims of the '826 Patent in view of the prior art references discussed herein.

16. If called upon to do so, I could and would testify truthfully regarding the points stated below in this declaration.

III. COMPENSATION

17. My work on this matter is being billed at my customary rate of 650.00 per hour. Also, I am being reimbursed for reasonable expenses I incur in relation to my services. I will be paid regardless of the outcome of any proceeding that my work is used in.

IV. OVERVIEW OF TASK & BASIS FOR OPINIONS

18. I have been asked to review the '770 Patent. I have been asked to provide opinions related to certain issues from the perspective of a person of ordinary skill, having knowledge of the relevant art, as of September 11, 2020, and—except where otherwise noted—the opinions stated in this declaration are from that perspective. The qualifications and abilities of such a person are described in paragraph 22 below.

19. More particularly, I have been informed that this proceeding is currently at a preliminary stage during which the Patent Trial and Appeal Board will decide whether the Petition establishes a reasonable likelihood of at least one claim of the '770 Patent being invalid. At this preliminary stage, I have been asked to focus my analysis on the Petition's proposed invalidity theories for the '770 Patent's independent claims 1, 16, and 19.

20. My opinions are based on my education, training, and experience as well as items that I reviewed to prepare my opinions, including the Petition, the documents listed in the Exhibit List included with the Petition, and any other items that I reference in my below analysis.

21. I understand that other issues may arise that require further explanation, and I will provide that explanation if appropriate. As a result, I respectfully reserve

the right to update and supplement this declaration and the information and opinions provided herein.

V. LEVEL OF ORDINARY SKILL IN THE ART

22. I understand that a patent must be analyzed from the perspective of a person of ordinary skill in the art (“POSITA”) as of the time of invention of the patent, which is typically considered to be the patent’s earliest filing date. While I do not necessarily agree with every aspect of Dr. Williams’ explanation of the level of ordinary skill in the art, I do not currently believe the aspects of his explanation I would change or clarify would impact the analysis set forth in this declaration. For purposes of this declaration, my opinions are therefore provided from the perspective of the POSITA described in paragraph 30 of Dr. Williams’ declaration (Ex. 1003) as of September 11, 2020. Such a POSITA would have been familiar with the concepts and types of computing networks described below.

VI. CLAIM CONSTRUCTION

23. I understand claims are to be given their ordinary and customary meaning to a POSITA in view of the claims, specification, and prosecution history. I also understand that Applicants can define their own claim terms in the specification, which will be used when interpreting the claims.

A. Defined Terms

24. The '770 Patent provides a number of explicit definitions, some of which are terms that appear in the claims. For example, the '770 Patent defines the terms “proxy rotator,” “request optimizer,” “scraping strategy,” and “user device.” EX1001, 7:1-8:36. I use these definitions when interpreting the claims of the '770 Patent.

B. Identifying Discrepancies Between the Request and the Scraping Strategy

25. Claims 1 and 19 recite “identifying discrepancies between the request and the scraping strategy” and claim 16 recites “to identify discrepancies between the request and the scraping strategy.” EX1001, 19:15-25, 20:16-26, 12:43-53.

26. The Petition and Dr. Williams assert that the '770 Patent does not define a discrepancy; they instead rely on the Merriam-Webster dictionary to define this term. Pet., 25; EX1003, ¶88.¹ According to Dr. Williams, in view of the dictionary definition, a POSITA “would have understood identifying a discrepancy as identifying a disagreement or some difference **between the parameters of the received request and the parameters of a request** according to the selected

¹ The Petition and Dr. Williams’ declaration (EX1003) are virtually identical.

Although I primarily address Dr. Williams’ declaration herein, these remarks would similarly apply to the Petition.

scraping strategy.” Pet., 25; EX1003, ¶88 (emphasis added). Dr. Williams’ construction is mistaken.

27. The ’770 Patent discloses identifying discrepancies between a request and a scraping strategy in a context that a POSITA would have understood. The ’770 Patent first provides several examples of the identification of a discrepancy. In one such example, a user sends **a request** “where the HTTP request body has its content type defined as one of the Multipurpose Internet Mail Extensions (MIME) types of “compressed file” e.g., in .zip format (MIME type=application/zip).” EX1001, 10:53-57. However, in this scenario, it is identified that the target “works better with compressed data in .gz format (MIME type=application/gzip).” EX1001, 10:57-60. In this example, the system “**identifies this discrepancy**” between the data type of **the request** (.zip format) and that of the **scraping strategy** (.gz format), which is one of several examples provided. *See* EX1001, 10:65-11:27. A POSITA reading the specification and its examples of identifying discrepancies, would understand the identification of discrepancies to be between **a request and a scraping strategy**—not between two requests.

28. Dr. Williams’ proposed construction is contrary to this understanding. Dr. Williams proposes to re-define this discrepancy from one between (1) a request and (2) a scraping strategy (as in the claim) to one between (1) a request and (3) a second request. *See* EX1003, ¶88 (“a POSA would have understood identifying a

discrepancy as identifying a disagreement or some difference between the parameters of the received [first] request and the parameters of a [second] request according to the selected scraping strategy”). As explained in the example above, the claims recite and the patent describes identifying discrepancies between a request and a scraping strategy, not two requests. Nor would the dictionary definition have led a POSITA to understand the phrase “discrepancies between the request and the scraping strategy” to mean a discrepancy between two requests.

VII. COUSINS DOES NOT DISCLOSE EACH CLAIM FEATURE

A. Cousins Does Not Identify Discrepancies Between the Request and a Scraping Strategy

29. As explained above in Section VI.B, “identify[ing] discrepancies between the request and the scraping strategy” means identifying discrepancies between a request and a scraping strategy—**not** identifying a discrepancy between a request and another request. None of the Dr. Williams’ three cited examples identifies discrepancies between a request and a scraping strategy. *See* EX1003, ¶¶88-92; Pet., 25-27.

30. As explained in the ’770 Patent, “Scraping strategy **504**—is a set or request parameters and their values, optimized for a particular type of request or target, that Request Optimizer 104 applies to the original request based on the decisions of what adjustments should be introduced to the original request.” EX1001, 8:27-31. This scraping strategy is different from the claimed request, as

the scraping strategy is used to “adjust the request in order to have better scraping results.” EX1001, 15:50-55. Thus, the scraping strategies are used to adjust the request to return better results to the requester.

31. In Dr. Williams’ first example (EX1003, ¶89), Cousins sends a crawl request to the outgoing queue 120 to later be pulled by a minion. EX1004, 12:15-16, FIGs. 1 and 5. Before placing the request in the queue 120, policy engine 116 checks other requests already within queue 120 to determine if there are existing requests for the same target site. EX1004, 11:17-24. If policy engine 116 determines that the request and a second, existing request are for the same site, the requests are merged into a single crawl request. EX1004, 11:17-24. Dr. Williams asserts this includes identifying discrepancies. EX1003, ¶89; Pet., 26. However, as explained above, the identification of a discrepancy between two separate requests is not what is claimed. Cousins’ crawl requests are different from the scraping strategy disclosed in the ’770 Patent. Additionally, this merging of two requests does not return better (or different) results for the requester. Instead, it returns the exact same results and simply reduces the load on the system to return those results. A POSITA would not understand any of Cousins’ requests (the outgoing request, existing request, or combined request) to be a **scraping strategy**. Therefore, Cousins’ teachings of simply combining requests cannot disclose identifying a discrepancy

between the request and the scraping strategy and Dr. Williams' first example does not disclose the claimed limitation.

32. In Dr. Williams' second example (EX1003, ¶90-91), Cousins discloses a scenario where a crawl request is compared with recently executed requests stored within historical database 104 to determine if the requested data is already stored within the database. EX1004, 7:29-8:21. As explained, Cousins' crawl requests are different from the claimed **scraping strategy**. Here, Cousins is once again comparing a request with a second, recently executed request to determine if a web crawl is required. This process does not return better (or different) results for the requester; its simply uses caching to return the exact same results as originally requested. A POSITA would not understand any of Cousins' requests (the potential, outgoing request or the recently-executed request) to be a scraping strategy. Therefore, Cousins' teachings of disregarding requests cannot disclose identifying a discrepancy between the request and the scraping strategy and Dr. Williams' second example does not disclose the claimed limitation.

33. In Dr. Williams' third example (EX1003, ¶92), Cousins discloses a method of determining the priority of the requests within the outgoing queue 120. EX1004, 12:21-26. Here, a first request is compared to a second request to determine which has higher priority (i.e., is executed first). Cousins explains that its system prioritizes user-demand requests over automated (non-user) requests. Again,

for the same reasons as explained above, a POSITA would not understand any of Cousins' requests (the user-demand request or the automated discovery crawl request) to be a scraping strategy, as simply moving one request in front of another does not disclose identifying a discrepancy between the request and the scraping strategy. Accordingly, Dr. Williams' third example does not disclose the claimed limitation.

B. Cousins Does Not Compare and Adjust Parameters of Requests

34. It is not clear what components or disclosure of Cousins Dr. Williams relies on to teach the claimed "parameters" of the request. Dr. Williams' most extensive discussion of these parameters is that "parameters of a request include a request for a specific item." EX1009, ¶84; Pet., 23. But a POSITA would not have understood the parameters of a request to be the request itself, particularly not when reading that term as used the specification of the '770 Patent. Instead, a POSITA would have understood that parameters may be a part of, but not the same as, a request. See EX1001, 11:16-20 ("the parameters within the request"). A POSITA also would not have understood a request to necessarily include parameters.

35. At most, Dr. Williams' mention of a request for a specific item could be in reference to the specific item *of data* a request seeks. See EX1004, 6:14-15. For example, a request can be generated for a specific item of data (e.g., price of an item at auction) from a target site (e.g., www.auctionwatch.com) of a crawl request.

However, Cousins does not compare or adjust the specific item of data, and Dr. Williams does not mention this “specific item” again. *See* EX1003, ¶¶84-99; Pet., 22-30.

36. Dr. Williams further states that “Cousins discloses comparing the request parameters with lists of policies, e.g., scraping strategies, that includes where ‘[p]olicies are maintained in databases sorted by different categories such as target site, time of day, location of target site, etc.’” Pet., 23 (citing EX1004, 3:13-16). However, a POSITA would not have understood maintaining policy databases according to different categories to suggest that the “specific item” of data is compared to any of the listed policies. For example, Cousins explains that the requested “specific item” of data could be the “price of an [item at] auction (EX1004, 5:7-9); but a POSITA would not understand Cousins to disclose that this price is compared to the time of day.

37. For “adjusting the request,” Dr. Williams cites to Cousins’ disclosure of combining multiple requests into a single crawl request. EX1003, ¶¶93-34; Pet., 27-28. As explained in Section VII.A above, Cousins’ policy engine 116 combines requests when two requests are directed to the same web site. EX1004, 11:17-24. When combining the requests, the policy engine simply adds the request for data from the new request into the existing request, which shares the same desired URL. EX1004, 11:17-24. This is illustrated in FIG. 4 of Cousins, which has an extra parser

ID field as compared to the single request in FIG. 3. But the combining of separate requests is not **adjusting the parameters** of the request according to the scraping strategy to form an adjusted request, as nothing has been adjusted from the request, the requests have only been combined. That is, the specific item of data requested is the same regardless of whether it is sent in a standalone request or a combined request. As such, a POSITA would not understand Cousins' disclosure of combining multiple requests as adjusting parameters of the request.

C. Cousins Does Not Send an Adjusted Request to a Target Through a Proxy Selected According to a Scraping Strategy

1. Claims 1 and 19

38. For "sending the adjusted request to a target through a proxy selected according to the scraping strategy," Dr. Williams relies on the "previously discussed" scraping strategies that "include best practices and/or efficiency-based criteria." EX1003, ¶88. Paragraph 84 of Dr. Williams' declaration identifies these best practices and/or efficiency based scraping strategies as "[d]o not crawl between 9:00 a.m. and 5:00 p.m." or "[d]o not crawl if web site is shut down," or "[n]ever crawl." A POSITA would have understood that each of the alleged scraping strategies identified by Dr. Williams concerns scenarios in which a crawl request is not sent to a target. For example, the web crawler does not send a crawl request to the target site between 9:00 a.m. and 5:00 p.m., or the web crawler does not send a crawl request to the target site if the site is shut down, or the web crawler never sends

a crawl request to a specific target site. EX1004, 3:17-18. Because each of these polies requires not sending requests, the request is not sent to a target. EX1004, 11:2-4. Instead, the request is stored in a “request queue” within the web crawler system and it is not sent to a target through a proxy. EX1004, 11:2-4. Therefore, the identified scraping strategies—best practices and/or efficiency-based criteria—do not include “sending” an adjusted request.

39. Next, Dr. Williams identifies Cousins’ minions as corresponding to the claimed proxy. EX1003, ¶95; Pet., 28-29. However, Cousins does not disclose selecting these minions according to any kind of scraping strategy. As depicted in FIG. 5 of Cousins, the policy engine 116 builds polies for target sites and determines when a crawl request is permitted along with the priority for the crawl. *See* EX1004, 11:1-9, 31-33. “Once the priority of a crawl request 400 is established, the crawl request 400 is sent 520 to the outgoing queue 120, and the crawl requests 400 are retrieved from the outgoing queue 120 responsive to their priorities.” EX1004, 12:15-17. Policy engine 116 does not regulate the retrieval of the crawl request other than by determining its priority; once sent to outgoing queue 120, the request will wait to be retrieved. Cousins explains that the request “stays in the queue 120 until the crawl request 400 is the highest priority request waiting in the queue. Then, **a minion 124 will pull the request** from the queue 120 and fetch the page from the target site 128 that contains the requested data.” EX1004, 13:3-5. It is the minion

that pulls the request from the top of the queue 120. EX1004, 13:3-5. The policy engine (or other component) does not select the minion per a policy. Rather, the minion simply fetches the highest priority request from the queue.

40. The framework doesn't change when a request fails because a minion is unable to crawl a target site. Cousins plans for such a failure and automatically schedules a second, redundant crawl request shortly after the first is retrieved by a minion. EX1004, 13:6-8 ("second crawl request 400 to be made in the near future on the expectation that the first crawl request 400 will fail."). This second request will either be deleted (if the first request is successful) or it will be retrieved in a similar manner to the first request, by waiting until it is the highest priority in the queue. *See* EX1004, 13:3-10. Thus, the first and second requests are each pulled by a minion when they are at the top of the outgoing queue 120; and are not sent to a minion selected according to any policy. A POSITA would not have understood these minions to be "a proxy selected according to the scraping strategy."

41. Finally, Dr. Williams quotes Cousins disclosure that "in general, minions 124 are located topologically as close as possible to the target site's server 708." EX1003, ¶95 (citing EX1004, 15:1-2); Pet., 29. However, a POSITA would not have understood this cited portion to disclose selecting minions according to a scraping strategy. This quoted portion of Cousins is simply describing the possible physical locations of the minions and that their small size allows them to be stored

in a variety of computing environments. EX1004, 15:4-6. Such disclosure of selecting a physical location for a minion fails to establish that web crawler selects this minion according to a scraping policy and then sends an adjusted request to the target through this minion. For these reasons, a POSITA would not have understood the quoted portions of Cousins to disclose sending an adjusted request to a target through a proxy selected according to a scraping strategy. .

2. Claim 16

42. Claim 16 further requires that the proxy be “selected from a proxy database by the proxy rotator.” EX1001, 20:16-26. Dr. Williams identifies policy engine 116 as the proxy rotator. EX1003 ¶102. But, as explained above, Cousins’ policy engine 116 does not select minions. *See* Section VII.B.1. Instead, the “minion 124 will pull the request from the queue 120.” EX1004, 13:3-5.

43. Dr. Williams support for concluding that the proxy engine selects a minion is that “Cousins discloses, due to network congestion or a network failure, the selection of a proxy is determined by the scraping strategy where ‘a target site can be accessed from multiple different pathways’ where ‘if one minion is unable to crawl a target site, because of congestion or network failures, a different minion located elsewhere in the Internet can still access the target site and provide the requested crawl.’ *Id.* at 4:33-5:3.” EX1003, ¶113. But this passage does not describe

the policy engine selecting a minion, it only describes that if one minion can not do the work, a different minion maybe able to do the work.

44. Further, a POSITA would not have understood Dr. Williams's citation to the use of historical database 104 as disclosing the selection of a minion by policy engine 116. Ex1003 ¶ 114. As depicted in steps 216 and 220 of Cousins' FIG. 2, the requested data 136 is checked with a historical database 104 to determine if the data is already stored in the database. *See* EX1004, 7:29-8:21. If the data is found in the historical database 104, then the data is retrieved without requesting a crawl. EX1004, 8:7-23. In this scenario, "the crawler will terminate the user-demanded crawl." EX1004, 3:31-4:1. Cousins explains that "by maintaining a historical database, the crawler of the present invention can ***avoid*** crawls completely by satisfying a request from the historical database, thereby minimizing traffic on a target site." EX1004, 4:1-3. Thus, traffic to a target site can be decreased when a crawl is not sent, such that a terminated crawl does not *send* an adjusted request.

45. On the other hand, if the requested data is not in historical database 104, the request is forwarded to policy engine 116. EX1004, 8:7-23. This is not sending an adjusted request or selecting a proxy from a proxy database by the proxy rotator because the request proceeds in the same way described in Section VII.B.1 above with reference to Claims 1 and 16. Thus, in either scenario, Cousins does not send

an adjusted request to a target through a proxy selected from a proxy database by the proxy rotator according to the scraping strategy.

D. Cousins' Minion Is Not A Proxy Rotator

46. For its Ground 2, the Dr. William's asserts that "Cousins explicit reference to the Squid proxy would be known by a POSA to be a proxy rotator."

¶160. In my opinion, that is an inaccurate representation of the Squid proxy teachings.

47. The '770 Patent states: "Proxy Rotator **106**—is a part of the Service Provider Infrastructure and is coupled with separate external components implementing specific assisting functionalities and is responsible for proxy control, rotation, maintenance, collecting statistical data, and reporting." EX1001, 7:24-28. Claim 16 recites that "*a proxy selected from a proxy database by the proxy rotator.*" Thus, a POSITA would understand that the proxy rotator is different from a proxy.

48. In Cousins, the minions 124 can use proxies such as the Squid proxy. Squid is an open source version of a proxy server that can be installed on a Linux server. EX1009, 23/468. Squid is a caching proxy that is used to reduce response times by caching and reusing frequently requested web pages. EX2003, at 1. In caching, the Squid proxy will store recently retrieved web content for possible reuse so that subsequent web request will not need to be forwarded to the origin server (aka web server). EX1009, 23/468. As the Squid proxy merely acts as a proxy, a

POSITA would understand this proxy to be different than the claimed proxy rotator (which selects a proxy from a proxy database).

49. Squid is a generic proxy software program that can be installed on most any Linux machine; a POSITA would understand that it can be implemented in a variety of configurations. In the context of Cousins' system, if a minion uses a Squid proxy, then it can retrieve requested content from the Squid proxy if that requested content is cached—called a cache hit. EX1009, 24/468. Otherwise, this request will be forwarded to the origin server to receive the requested content—called a cache miss. EX1009, 24/468. As explained below, a POSITA would not have understood the minions use of a Squid proxy to disclose a “proxy rotator” in the context of the '770 Patent. Dr. Williams' citation of the Squid proxy website (EX1010) and the Squid Definitive Guide (EX1009) would not change this understanding.

50. To start, the claimed proxy rotator selects a proxy from a proxy database. However, there is no showing of a proxy database in Squid. Further, Cousins' historical database, cited in paragraph 114 of Dr. Williams' declaration, does not store proxies. Therefore, a POSITA would not have understood any of the cited portions of Cousins or Squid to teach “a proxy selected from a proxy database by the proxy rotator.”

51. The Squid proxy website (EX1010) shows an example configuration from a catalog of “configuration examples” on the wiki-page for the Squid proxy,

with over 90 other examples. EX2004, at 1-5. A POSITA would have understood that these specific configurations are not globally utilized for every squid proxy but are mere examples of the various different configurations that can be utilized depending on the specific network environment or system. Indeed, the Squid proxy website (EX1010) cited by Dr. Williams discloses “weird” configurations that have “no actual useful benefits.” EX1010, at 1. A POSITA would not understand this configuration to be applicable to Cousins system and, likewise, would not understand Cousin’s minions to be configured as described in EX1010. For example, the website discloses “rotating three IPs based on time of day.” EX1010, at 2. But this simply means that the `tcp_outgoing_address` is changed between different IP addresses to bind outgoing TCP connections from the squid to specific local addresses. EX1009, 389/468. This is not selecting between different proxies within a proxy database and then sending a request through the selected proxy. Further, the Squid proxy website explicitly states that “there is no actual benefit from using [this configuration].” EX1010, at 1. As such, a POSITA would not have understood the Squid proxy website (EX1010) to disclose a proxy rotator or teach that Cousins’ minions would correspond to a proxy rotator.

52. A POSITA would not have understood the other configurations cited in the Squid Definitive Guide (EX1009) to disclose a proxy rotator. As described in Chapter 15 of the Squid Definitive Guide, the Squid proxy may operate in a server

accelerator mode in which the Squid proxy is functioning as an origin server accelerator. EX1009, 324/468. In this set-up, the owner of the web server may utilize a squid proxy to improve performance of the servers. EX1009, 324/468. For example, Squid Definitive Guide discloses “four separate cases” depending on “how many backend boxes you have and how many origin server names you are accelerating.” EX1009, 330/468. In one of these scenarios (Many Boxes, One Server Name), one DNS name is used for backend servers with IP addresses. EX1009, 331/468. Here, when a user requests content from a website, it would be sent to the squid proxy. If the content was cached, then the squid proxy would send the content back to the user. However, if the content was not cached (cache miss), then the request would be forwarded to the backend servers. EX1009, 331/468. Because the backend servers include multiple IP addresses, the Squid proxy will iterate between all addresses so that the traffic is balanced evenly between the servers. EX1009, 331/468. This is not selecting between different proxies within a proxy database and then sending a request through the selected proxy. Thus, a POSITA would not understand the Squid’s server accelerator mode as disclosing a proxy rotator in the context of the ’770 Patent or selecting a proxy from a proxy database. Additionally, this backend functionality of the Squid proxy is quite different from the functionality disclosed by Cousins’ web crawler and a POSITA

Declaration of James Olivier, Ph.D.

would not understand these configurations to be present or “common knowledge” in light of Cousins’ disclosure.

VIII. CONCLUSION

53. I declare that all statements made herein of my knowledge are true, and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

8/30/2023

Date

James Olivier Ph.D.

James Olivier, Ph.D.