

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

VIRTAMOVE, CORP.,
Patent Owner.

Case No. IPR2025-000489
Patent No. 7,784,058

**DECLARATION OF ERIK DE LA IGLESIA IN SUPPORT OF PATENT
OWNER'S PRELIMINARY RESPONSE TO THE PETITION**

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true.

Executed on June 10, 2025, at Mountain View, California.



Erik de la Iglesia

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I, Erik de la Iglesia, hereby declare as follows:

I. Introduction

1. I am over the age of eighteen (18) years and otherwise competent to make this declaration.

2. I have been retained as an expert witness on behalf of Patent Owner for the above-captioned *inter partes* review (“IPR”). I understand that the petition for *inter partes* review involves U.S. Patent No. 7,784,058 (“the ’058 patent”).

3. I make this declaration based on my personal knowledge, educational background and training, consideration of the materials I discuss herein, and my expert opinions.

4. My work on this matter is being billed at my normal hourly consulting rate of \$750, with reimbursement for actual expenses. My compensation is not related to the outcome of any proceeding involving the ’058 patent. I have no personal interest in the outcome of the case.

5. In preparing this Declaration, I have reviewed and considered the ’058 patent, the ’058 patent’s prosecution history, the Petition and prior art references submitted with the Petition, the declaration submitted by Dr. Bhattacharjee in this proceeding, and each document cited in my declaration.

II. Background and Qualifications

6. My qualifications for forming the opinions given in this declaration are summarized here and are addressed more fully in my curriculum vitae, which is submitted as Exhibit 2002.

7. I hold a Bachelor of Science degree in Electrical Engineering from the University of Florida, and a Master of Science degree in Electrical Engineering from Stanford University. While at Stanford, I was an NSF Graduate Research Fellow. My graduate focus included VLSI CMOS architecture, high-speed circuit design, computer networks and protocols, and artificial intelligence. I have worked in several computer and electrical engineering related fields for over 25 years resulting in 68 issued U.S. patents that have been cited over 2850 times in USPTO patent applications. Since 2003, I have served in a number of chief architect and founder roles of companies that have been acquired or gone public. My experiences include the design or implementation of virtualization, concurrent operating system deployment in datacenters and datacenter application deployment and management relevant to the technology of the '058 patent.

8. Between December 1997 and November 1999, I was a circuit design engineer at Intel Corporation within the Mobile and Handheld Products Group. My responsibilities included working on several aspects of mobile processors and chipsets including clock and power distribution, dynamic clock frequency

selection, and the circuit design, device simulation, and validation of such features. Until March of 2000, I worked on similar functionality within the Microprocessor Products Group for the Itanium 3 and 4 products.

9. My work in power distribution included thermal modeling and predictive control of silicon devices and their packaging such as multi-tiered cooling systems for embedded, mobile, and desktop environments. Such systems included multiple tiers of thermal sensors, active and passive thermal control systems, and the feedback and analytic firmware and software control. My models were part of the development of the Thermal Design Power (TDP) metrics used by OEM and system designers to plan thermal control solutions for consumer and industrial products.

10. Between March 2000 and September 2003, I worked as a logic designer and architect for WebStacks and, through acquisition, Extreme Networks. WebStacks built a fully hardware-based TCP and HTTP processing stack for network processing functions including load balancing, proxy processing, and content rewriting. I was responsible for the architecture and design of the HTTP processing engine including header extraction and processing.

11. Between August 2003 and August 2007, I worked as Founder, Chief Architect and Director of Engineering for Reconnex, later acquired by McAfee. Reconnex built a gigabit line-rate network security analyzer capable of

classification, heuristic analysis, and policy enforcement on arbitrary protocols and content types. The Reconnex product captured and analyzed content transmitted over the internet using HTTP and other protocols, including storage protocols. Design of the Reconnex system was based on a modified and customized version of the Linux kernel which included specifically designed driver source code and interfacing between the application and kernel domains. Reconnex technology was employed in the audit and compliance verticals based on its ability to quickly analyze and classify the content of transmissions and interact with protocols and communications crossing corporate and departmental boundaries.

12. Between August 2007 and September 2008, I founded Strangways, a company focused on addressing messaging security for webmail and internet messaging protocols. Products and technology developed by Strangways were sold to SendMail Inc., Iron Port (Cisco), and other companies. The Strangways product utilized a Squid caching server and ICAP content rewrite server to translate HTTP to SMTP.

13. Between September 2008 and April 2014, I worked as Chief Architect for Gridiron Systems and, through acquisition, Senior Director of Technology for Violin Memory. I held the Senior Director position with Violin Memory both before and after the company's IPO. My responsibilities included architecture and design of flash media controllers, adaptive caching design, and machine learning

for application storage behavior analytics. Gridiron Systems products were deployed to enable scaling within virtual environments and to support parallel application deployments requiring concurrent access to large datasets.

14. The Gridiron product was a storage accelerator used in many analytic environments such as big data architectures with constant ingest and processing of financial, consumer and IoT data. In my role as Chief Architect, I often worked with customers to implement and accelerate their analytics environments and spoke on related topics at trade shows and industry user groups. During product development, I worked with the data science team at customer sites to improve database and storage performance for real-time shopping recommendation and user tracking for advertising.

15. Additional information regarding my employment history and prior expert testimony is included in Exhibit 2002. As reflected in Exhibit 2002, I have consulted on several matters involving intellectual property disputes including instances of alleged patent infringement requiring analysis of source code, reviewing and analyzing patents, writing expert reports, and testifying in court. I have testified at deposition and at trial in a number of these cases.

III. Legal Principles

A. Claim Construction

16. I understand that the first step in performing a validity analysis of the patent claims is to interpret the meaning and scope of the claims by construing the terms and phrases found in those claims. I understand that the appropriate construction of a claim term is its ordinary and accustomed meaning as understood by one of ordinary skill in the art at the time of the invention in the context of the entire patent and the prosecution history.

17. I understand that standard for claim construction in an *inter partes* review is the same standard as is applied in district court proceedings.

18. I understand that a determination of the meaning and scope of the claims is a matter of law. I have been informed that to determine the meaning of the claims, one should consider the intrinsic evidence, which includes the patent's claims, written description, and prosecution history.

B. Burden of Proof

19. I understand that in an *inter partes* review, the petitioner has the burden of proving unpatentability by a preponderance of the evidence.

C. Anticipation

20. I have been instructed by counsel and understand that a reference is anticipated if a single prior art reference discloses each and every claim element,

either explicitly or inherently, as arranged in the same way as in the claim. I understand that where even one claim element is not disclosed in a reference, a contention of anticipation fails.

21. I further understand that when a reference fails to explicitly disclose a claim element, that reference inherently discloses that element only if the reference must *necessarily* (or “inherently”) include the undisclosed claim element.

D. Obviousness

22. I have been instructed by counsel and understand that a combination of prior art references may render a claim obvious if, at the time of the invention, a person of ordinary skill in the art would have selected and combined those prior-art elements in the normal course of research and development to yield the claimed invention.

23. I understand that in an obviousness analysis, one should consider the *Graham* factors, including: the scope and content of the prior art; the differences between the claimed inventions and the prior art; and the level of ordinary skill in the art. I further understand the obviousness analysis is to be performed on a claim-by-claim basis. I understand that a person of ordinary skill in the art is a person of ordinary creativity, not an automaton.

24. I have been instructed by counsel and understand that obviousness requires more than a mere showing that the prior art includes separate references

covering each separate limitation in a claim under examination. I understand obviousness requires the additional showing that a person of ordinary skill at the time of the invention would have been motivated to combine those references in a manner that would include all limitations of the challenged claim, and, in making that combination, a person of ordinary skill in the art would have had a reasonable expectation of success.

25. I also understand that an obviousness analysis must be conducted with awareness of the distortion caused by hindsight bias and with caution of arguments reliant upon *ex post* reasoning. For instance, I understand that when considering obviousness, I should put myself in the position of a person of ordinary skill in the field at the time of the invention, rather than considering new information that is known today, but was not known before the priority date of the challenged patent.

IV. Person of Ordinary Skill in the Art

26. Dr. Bhattacharjee states that a POSITA in the field of the '058 patent as of September 22, 2003 “would have had at least a bachelor’s degree in computer science, computer engineering, or a related field, with three years of academic and/or industry experience in the area of ‘computing system[s]’ and ‘application libraries,’” and that “[m]ore education may substitute for less experience.” Ex. 1003 ¶50. For purposes of my analysis in this declaration only, I do not dispute Dr. Bhattacharjee’s proposed level of ordinary skill.

27. I have at least this level of skill in the art, and have had such level of skill since before the September 22, 2003, the earliest alleged priority date of the '058 patent.

V. Claim Construction

28. I understand that the parties have proposed various claim terms for construction. However, for purposes of the analysis set forth in this declaration, none of those disputes need be resolved.

VI. I disagree with the Petition's theory as to claim 1.

29. Claim 1 of the '058 patent requires that a claimed shared library critical system element (or "SLCSE") be provided to a first application "for running a first instance of the SLCSE," and a SLCSE be provided to a second application "for running a second instance of the SLCSE *simultaneously*." See Ex. 1001, Claim 1 ("wherein a SLCSE related to a predetermined function is provided to the first of the plurality of software applications for running a first instance of the SLCSE, and wherein a SLCSE for performing a same function is provided to the second of the plurality of software applications for running a second instance of the SLCSE simultaneously").

30. The Petition contends that "Callendar's SLCSEs are operations provided by a DLL" (Pet. 49), such as operations for "sending and receiving information" (Pet. 47) via an HCA adapter. See Pet. 37 ("Furthermore, each

Callendar SLCSE replicates the function of the corresponding OSCSE: the user-mode sending function performs the same ‘operation’ (sending data via the HCA adapter) as the kernel-mode counterpart operation, and the user-mode receiving function likewise performs the same ‘operation’ (receiving data via the HCA adapter) as the kernel-mode counterpart operation.”). In other words, the SLCSEs the Petition relies on are operations of sending and receiving data via an HCA adapter.

31. Notably, a POSITA would understand that an HCA adapter would be driven by a single driver, and a system would only have a single driver available to carry out the operations of sending and receiving data. Thus, at any given time, only *one* application would be able to send and receive data via the HCA adapter, such that two applications could not *simultaneously* be performing the same sending and receiving operations under the Petition’s theory of invalidity pursuant to Callendar. While two applications may be able to *queue* data to the HCA adapter, the actual operations of *sending* and *receiving* data via the HCA adapter would only be available to one application at a time. In other words, it is simply not possible for multiple applications that have *simultaneous* access to “sending” and “receiving” operations for an HCA adapter, because only a *single* send or receive operation can be carried out at any given time using an HCA adapter.

32. It is thus my opinion that under the Petition's theory where the SLCSEs are operations for sending and receiving data via an HCA adapter, Callendar does not disclose claim 1 as the Petition contends.