

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ROKU, INC. and VIZIO, INC.,
Petitioners,

v.

ANCORA TECHNOLOGIES INC.,
Patent Owner.

Case IPR2021-01406
U.S. Patent No. 6,411,941

**DECLARATION OF ANDREW WOLFE, PH.D., IN SUPPORT OF
PETITIONERS' REPLY TO PATENT OWNER'S RESPONSE**

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I. INTRODUCTION

1. I previously submitted a declaration (EX1003) in this matter on behalf of Petitioners in support of their petition filed on August 24, 2021. I understand that the Board has instituted review, and that Patent Owner has submitted a response. I also understand that Patent Owner's expert witness, Dr. David Martin, has submitted a declaration in support of Patent Owner's response (EX2018). I have been asked to provide my technical review, analysis, and insight regarding both the Patent Owner's response and Dr. Martin's supporting declaration. As explained in more detail below, I disagree with many of Dr. Martin's opinions and analysis.

2. My background and qualifications were provided in paragraphs 6-17 of my prior declaration, and a copy of my CV was appended thereto as Appendix A.

3. Since my prior declaration, I have reviewed and considered the following additional materials:

Exhibit	Description
--	Patent Owner's Response (Paper 22)
1035	Transcript of the Deposition of David Martin, Ph.D., July 14, 2022
1037	Denon DP-35F/DP-45F Instruction Manual, Nippon Columbia Co., Ltd.
1038	Excerpt from <i>Dictionary of Computing</i> , 4 th ed., Oxford University Press, 1996
1039	U.S. Patent No. 5,568,552 to Davis
1040	Guttman, B., et al., <i>Computer Security</i> , National Institute of Standards and Technology, 1995)

Exhibit	Description
1041	Kaliski, B., “PKCS #1: RSA Encryption,” RFC 2313, The Internet Society, Network Working Group, March 1998
1042	U.S. Patent No. 5,724,425 to Chang et al.
1043	U.S. Patent No. 5,935,246 to Benson

II. HELLMAN DISCLOSES THE “AGENT” LIMITATION.

A. Patent Owner’s Construction Requiring that the Verification Structure Be Set Up Solely by “OS-Level Software” Is Unsupported and Incorrect.

4. Dr. Martin contends that the claimed “agent” is limited to pure software running “at the OS level.” EX2018, ¶129; EX1035, 140:18-141:12. As an initial matter, this construction is vague and unclear. Dr. Martin does not explain what “OS-level” means in this context, provide any examples of OS-level programs, or offer guidance about how to determine whether a program operates at the OS level. In his deposition, Dr. Martin seemed to provide varying criteria for making such a determination:

- OS-level software “relates to programs that are running that use the running operating system services, as part of their operation,” EX1035, 100:8-22;
- “OS-level software can be thought of as running through the operating system,” *id.*, 101:19-102:4;
- OS-level software “rel[ies] on operating system services and is doing so after the operating system is running,” *id.*, 102:5-9, 105:4-10;

5. These criteria are themselves ambiguous. Nevertheless, I disagree with Dr. Martin’s construction limiting the claimed “agent” to OS-level software based on the criteria set forth above. As an initial matter, the term “agent” is not limited to a pure software implementation. “Agent” is generally understood in the art to encompass both software and hardware. For example, the Oxford Dictionary of Computing (4th ed. 1996) defines “agent” as any “autonomous system that receives information from its environment, processes it, and performs actions on that environment.” EX1038, 11. The dictionary goes on to say that agents “may be software, *hardware*, or both.” *Id.* (emphasis added). Many patents and articles describe agents in various contexts consistent with this definition. For example, U.S. Patent No. 5,568,552—an Intel patent filed in 1995—describes a “hardware agent” for enforcing software licenses. The hardware agent comprises a processing unit and non-volatile memory that stores encryption keys for determining whether particular software is licensed. *See* EX1039, 1:19-25, 3:1-10, 8:55-9:12. Thus, I disagree that agents are limited to software.

6. But even if the claimed agent in the ’941 patent were limited to a software-only implementation, it makes little sense to refer to the agent as if it acts alone, without the assistance from any hardware, to set up the claimed verification structure. All software operates using hardware; software, by itself and in the abstract, is not capable of performing any functions, let alone those claimed in the

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