

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMX, LLC,

Petitioner,

v.

CHRIMAR SYSTEMS, INC.,

Patent Owner

Case IPR2016-00573

Patent 9,019,838

DECLARATION OF DR. VIJAY K. MADISETTI

I. INTRODUCTION & ASSIGNMENT

1. My name is Vijay Madiseti, and I am a Professor of Electrical and Computer Engineering at Georgia Institute of Technology (“Georgia Tech”) in Atlanta, Georgia.

2. I have been retained by Patent Owner Chromar Systems, Inc. to serve as a technical expert in this proceeding as well as in several district court litigations, including *Chrimar Systems Inc. et al. v. Cisco Systems Inc., et. Al*, Civil Action No. 4:13-cv-01300-JSW (N.D. Cal.); *Chrimar Systems, Inc., et al. v. Alcatel-Lucent USA, Inc., et al.*, Case No. 6:15-cv-163-JDL (E.D. Tex.); and *Chrimar Systems Inc. et al. v. AMX, LLC*, Civil Action No. 6:15–CV–164–JDL (E.D. Tex.).

3. I have been asked to evaluate and opine on certain limited aspects of the Petition for *Inter Partes* Review in connection with Patent Owner’s Preliminary Response. Specifically, I have been asked to provide the following:

- a. an overview of the technology of U.S. Patent No. 9,019,838 (Ex. 1005, “the ’838 Patent”);
- b. an overview of the technology of U.S. Patent No. 6,115,468 (Ex. 1019, “De Nicolo ’468”);
- c. an overview of the technology of U.S. Patent No. 6,134,666 (Ex. 1020, “De Nicolo ’666”); and

d. a technical assessment as to whether I could create the proposed combination of De Nicolo '468 with De Nicolo '666 as described in the Petition, assuming for the sake of argument that the references include each claim element and could be combined.

4. At this time, I have been asked to provide testimony only on the topics addressed in this declaration. Among other things, I have reviewed the Petition and its exhibits, including the declaration of Richard Seifert (Ex. 1009), the '838 Patent, De Nicolo '468, and De Nicolo '666, as well as orders from the district court litigation involving the '838 Patent and Chrimar's other patents (Exs. 2017 – 2021) in the light of my education, training and experience in the field.

5. If the Board decides to institute this proceeding, and if asked to, I expect to offer additional opinions and analysis beyond those contained in this declaration.

6. I am being compensated by Chrimar at the rate of \$450 per hour for my time when working on this proceeding. My compensation is not tied in any way to the substance of my testimony or the outcome of this proceeding.

II. SUMMARY OF QUALIFICATIONS

7. I received a Bachelor of Technology in electronics and Electrical Communications Engineering from the Indian Institute of Technology (IIT) in 1984. I received my Ph.D. in Electrical Engineering and Computer Sciences

(EECS) from the University of California, Berkeley in 1989. I am currently a tenured Professor in Electrical and Computer Engineering at the Georgia Institute of Technology (“Georgia Tech”), and I have been on the faculty of Georgia Tech since 1989.

8. I have been elected a Fellow of the IEEE, for contributions to embedded computing systems. The Fellow is the highest grade of membership of the IEEE, a world professional body consisting of over 300,000 electrical and electronics engineers, with only one-tenth of one percent (0.1%) of the IEEE membership being elected to the Fellow grade each year. Election to Fellow is based upon votes cast by existing Fellows in IEEE.

9. I have authored or co-authored over 100 reference articles in the area of electrical engineering. I have also authored, co-authored, or edited several books in the areas of electrical engineering, communications, signal processing, communications, and computer engineering, including *VLSI Digital Signal Processors* (1995) and *The Digital Signal Processing Handbook* (First & Second Editions) (1998, 2012), and recently, *Cloud Computing* (2013).

10. I have been involved in research and technology in the area of distributed computer and information systems since the late 1980s, and my work in this area has focused on secure and efficient distribution of information over

networks, synchronization of updates across a distributed network, and multiprocessing systems and tools.

11. I have authored, co-authored, or edited several books in the past 20 years, as detailed in my attached CV. I have also been awarded the 2006 Frederick Emmons Terman Medal by the American Society of Engineering Education for contributions to Electrical Engineering, including authoring a widely used textbook in the design of VLSI digital signal processors. I was awarded VHDL International Best Ph.D. Dissertation Advisor Award in 1997 and the NSF RI Award in 1990. I was Technical Program Chair for both the IEEE MASCOTS in 1994 and the IEEE Workshop on Parallel and Distributed Simulation in 1990. In 1989, I was recognized with the Ira Kay IEEE/ACM Best Paper Award for Best Paper presented at the IEEE Annual Simulation Symposium.

12. Over the past 20 years, I have worked in and researched in the area of computer and communications networks and protocols in general, and in particular to LAN/Ethernet/WiFi/WAN/ IP networks, looking at the design of efficient protocols.

13. I have been an active consultant to industry and various research laboratories (including Massachusetts Institute of Technology Lincoln Labs and Johns Hopkins University Applied Physics Laboratory). My consulting work for MIT Lincoln Labs involved high resolution imaging for defense applications,

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