

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent of: Haller, et al.  
U.S. Patent No.: 7,039,033  
Issue Date: May 2, 2006 Atty Docket No.: 39521-0020IP1  
Appl. Serial No.: 09/850,399  
Filing Date: May 7, 2001  
Title: SYSTEM, DEVICE AND COMPUTER READABLE  
MEDIUM FOR PROVIDING A MANAGED WIRELESS  
NETWORK USING SHORT-RANGE RADIO SIGNALS

**DECLARATION OF DR. SAYFE KIAEI**

1. My name is Dr. Sayfe Kiaei. I understand that I am submitting a declaration in connection with *Inter Partes* Review proceedings before the United States Patent and Trademark Office for U.S. Patent Number 7,039,033 (“the ’033 Patent”).
2. I have been retained on behalf of Apple Inc. My compensation is not based on the outcome of my opinions.
3. My curriculum vitae (“CV”) is provided as Exhibit 1004.
4. I received a Bachelor of Science in Electrical Engineering from Washington State University in 1982; a Master’s of Science in Electrical and Computer Engineering from Washington State University in 1987; and a Ph.D. in Electrical and Computer Engineering from Washington State University in 1987.
5. I am a Professor in the School of Electrical, Computer and Energy Engineering Department at Arizona State University. I have held this position since 2001. From 2004 to 2017, I was also the Director of the National Science

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Foundation Center “Connection One,” which is an industry/university cooperative research center with over thirty industrial members and five university members focused on developing communication system and networking technologies. I have graduated over 100 MS and PhD students working under my supervision on their thesis, and many of them are professors in academia, or have senior positions in the industry. Currently I have 8 MS, PhD and postdoc students working with in my lab on research related to communication and networking systems, wireless and wireline systems, RF, and integrated circuits. My research is funded by various industry, federal agencies including NSF, DARPA, ONR, DOE, etc., with an average research funding of \$1M per year.

6. I have been involved with communication and networking systems, wireless and wireline systems, cellular systems, RF, digital signal processing, and related areas for the last 30 years starting with the first generation of mobile phones (analog AMPS mobile phones), 2G, and 3G including GSM, EDGE, IS-95, 1X CDMA, Wide band CDMA, Bluetooth, GPS, Wireless LAN, and related areas. I designed the baseband communication system for Motorola’s Talkabout Radio of which over 100 million are currently in the market place. At Motorola, I designed systems for DSL, DMT, OFDM, wireline and wireless systems, wireless networking, 1G-3G, UMTS, GPS and Bluetooth systems.

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7. From 1987 through 1993, I was a Professor at Oregon State University (tenured) in the Electrical and Computer Engineering Department. In my over thirty years of teaching experience, and have taught courses in networking, communication systems, RF, and electronics.

8. From 1993 to 2001, I was a Senior Member of Technical Staff with the Wireless Technology Center and Broadband Operations at Motorola Inc. where I was responsible for the development of wireless system, cellular system, RF integrated circuits, GPS, and Digital Subscriber Lines (DSL) transceivers. From 1985 through 1987, I worked with Boeing on the development of signal processing and control systems. I have also been a consultant on various projects with Intel (designing 2G, 3G cellular transceivers), Texas Instrument (developing 3G cellular and Bluetooth technologies), Sony Wireless (developing GPS technologies), Tektronics (designing wireless systems), and various other consultancies.

9. From 1997-2001 I was the standards technical analyst for Motorola and attended various standard-setting committees, including ITU, IEEE, and ETSI related to DSL, OFDM, CDMA, 2G, and 3G systems.

10. I have published over a hundred journal and conference papers covering topics such as communication systems, signal processing, radio frequency, integrated circuits (IC), filter design, and related areas.

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11. I am an IEEE Fellow, a distinction and highest-level membership awarded for extraordinary accomplishments. I am a member of IEEE Circuits and Systems Society, IEEE Solid State Circuits Society, and IEEE Communication Society, IEEE RF and Microwave committees, IEEE Low Power Symposium Committee, IEEE Signal Processing Society, IEEE Fellow Selection Committee, and many other International Electrical Engineering societies. I was one of the key organizers to establish the IEEE Radio Frequency Integrated Circuits (RFIC) symposium in 1995 and have been on the executive committee, and technical committee of RFIC for the last 16 years. The RFIC Symposium has grown and is now the premier international symposium in the world where the latest RF circuits and components are presented. I have been involved in several international conferences in the areas of RF, Communication, Signal Processing, and IC design.

12. I have received several awards including the Carter Best Teacher Award; the IEEE Darlington Award (which is given for the best technical paper on circuits and systems in the IEEE CAS Society), and the Motorola 10X Rapid Design Cycle Reduction Award.

13. I have reviewed the '033 Patent, including the claims of the patent in view of the specification and the file history. In addition, I have reviewed the following documents:

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- International Publication No. WO 2001/76154 A2 to Marchand (“Marchand”)
- U.S. Patent Application No. 09/541,529 to Marchand (“Marchand Priority”)
- Handley et al., Request For Comments 2543 SIP: Session Initiation Protocol, The Internet Society, March, 1999 (“RFC 2543”)
- U.S. Patent No. 6,836,474 to Larsson (“Larsson”)
- K. Arnold et al., The JINI™ Specification, Addison-Wesley, June 1, 1999 (“JINI Spec.”)
- U.S. Patent No. 6,560,642 to Nurmann (“Nurmann”)
- U.S. Patent No. 6,771,635 to Vilander (“Vilander”)
- U.S. Patent Application Publication No. 2002/0068608 to Souissi (“Souissi”)
- U.S. Patent No. 6,486,832 to Abramov, et al. (“Abramov”)
- U.S. Patent No. 7,193,965 to Nevo, et al. (“Nevo”)
- U.S. Patent No. 6,556,222 to Narayanaswami (“Narayanaswami”)
- International Publication No. WO 1999/22338 to Williams (“Williams”)
- U.S. Patent No. 7,155,163 to Cannon (“Cannon”)
- 802.11b, “Supplement to IEEE Standard for Information Technology – Telecommunications and Information Exchange Between Systems – Local and Metropolitan Area Networks – Specific Requirements. Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Higher-Speed Physical Layer Extension in the 2.4 GHz Band,” Print ISBN 0738118117, published January 20, 2000 (“802.11b”)
- IEEE 802.11, “IEEE Standard for Information Technology— Telecommunications and Information Exchange Between Systems—Local

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