

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

<i>In re</i> patent of Michel, <i>et al.</i>	§	Petition for <i>Inter Partes</i> Review
	§	
U.S. Patent No. 8,457,676	§	Attorney Docket No.: 52959.20
	§	Customer No.: 27683
Issued: June 4, 2013	§	
	§	Real Party in Interest:
Title: Power Headroom Reporting Method	§	Apple Inc.
	§	
	§	

**Declaration of Raziq Yaqub, Ph.D.**  
**Under 37 C.F.R. § 1.68**

I, Dr. Raziq Yaqub, hereby declare that:

1. I am over the age of 21, and I have personal knowledge of the facts contained herein unless otherwise indicated.

2. I earned my Ph.D. in wireless communications from Keio University, Tokyo, Japan in 1998, and my MBA in marketing from Fairleigh Dickenson University, New Jersey, USA in 2004. I received my Bachelor of Science degree in Electrical Engineering from the University of Engineering and Technology in Peshawar, Pakistan in 1987, and my Master's degree in Electrical Engineering from the same University in 1993.

3. I remained the Director of Technical Training at NIKSUN, Inc. until May 2015. NIKSUN develops a wide array of real-time and forensics-based cybersecurity and network performance management solutions for government & intelligence agencies, service providers, financial services companies, and large enterprises such as retailers and manufacturers.

4. From January 2010 to January 2013, and prior to joining NIKSUN in December 2012, I was an associate professor/adjunct professor at the Stevens Institute of Technology and the University of Tennessee at Chattanooga teaching courses in 4G/Mobile Broadband System, Advanced Metering Infrastructure and Cyber Security, Smart Grid, and Power Systems, among others.

5. From 2001 to 2009, I was a Research Director (2001-2005) and an Executive Director (2005-2009) at Toshiba America Research, Inc. (TARI) where I performed as well as supervised research dealing with IP core networks.

6. From 1999 to 2001, I was an Assistant Manager at KDDI Japan. After I received my Ph.D. degree in 1998, I also worked as a Research Engineer for Nokia Research Center Japan before beginning work at KDDI.

7. A true and correct copy of my Curriculum Vitae is attached hereto as Attachment A.

8. During my time at TARI and, in fact, since 1999, I participated as a member in various working groups of the 3rd Generation Partnership Project (3GPP) to develop technical specifications for various technologies such as 4G LTE and others. I also filed 34 patents and received inventor of the year award in 2014, from New Jersey Hall of Fame.

9. 3GPP is a global initiative partnership that unities seven 3GPP Organizational Partners from Asia, Europe and North America, the Association of Radio Industries and Businesses (ARIB) and Telecommunication Technology Committee (TTC) from Japan, the China Communications Standards Association (CCSA) from China, the Telecommunications Standards Development Society (TSDSI) from India, the Telecommunications Technology Association (TTA) from Korea, the European Telecommunications Standards Institute (ETSI), and the

Alliance for Telecommunications Industry Solutions (ATIS) from the United States. The goal of 3GPP is to provide its members with an environment to produce reports and specifications that define technologies covering cellular telecommunications networks, including User Equipment or Mobile Device (UE) technologies, Radio Access Network (RAN) technologies, Core Network (CN) technologies, and service and system capabilities—including work on codecs, security, and quality of service. The specifications also provide hooks for interworking with non-3GPP networks including Wi-Fi networks.

10. The technical specifications developed by 3GPP are contribution-driven by the 3GPP member companies. 3GPP has four Technical Specification Groups (TSGs): Radio Access Networks (RAN), Service & Systems Aspects (SA), Core Networks & Terminals (CT), and GSM EDGE Radio Access Networks (GERAN) (GERAN is currently inactive). The Working Groups within the TSGs meet regularly and also have a quarterly plenary meeting where member companies' contributions, draft specification, and other discussion documents are presented for approval.

11. From 1999-2001, I was the chairman of Working Group-1 Mobile Wireless Internet Forum; from 2002-2003, I was the 3GPP Rapporteur for the TR33.817 3GPP Technical Report, and throughout my time as a member of 3GPP, I served as the Chairman of various Technical Standards Ad-hoc meetings and

groups, and as a contributing member to different technical standards groups, where I submitted more than 150 contributions

12. Based upon my ten years as a regular attendee and a contributor of 3GPP meetings from 1999 to 2009, an ad-hoc Working Group Chairman, Working Group Rapporteur, and a member of a multitude of different Working Groups (collectively “my experience”), I have been asked to identify and confirm the date of the document listed below, which is a discussion document from a 3GPP Working Group that was distributed on 3GPP’s website or otherwise made publicly available:

**TSG-RAN WG2 #49, R2-052744, “Filtering for UE Power Headroom Measurement,” Seoul, Korea, Nov. 7-11, 2005 (“R2-052744”)<sup>1</sup>**

13. R2-052744 is exhibit APPL-1004 in this proceeding. I downloaded the copy of R2-052744 in APPL-1004 from the 3GPP website at the URL: [http://www.3gpp.org/ftp/tsg\\_ran/WG2\\_RL2/TSGR2\\_49/Documents/](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_49/Documents/). It is alternatively available on the 3GPP website at the URL: <http://www.3gpp.org/DynaReport/TDocExMtg--R2-49--24285.htm>.

14. R2-052744 is what 3GPP members call a contribution. Contribution documents are prepared by either an individual member or a group of member companies who want to discuss and/or propose a new feature or change(s) to an

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<sup>1</sup> TSG-RAN WG2 is also known as RAN2, and its documents are prefixed with “R2-”.

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