

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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BROADCOM CORPORATION  
Petitioner

v.

TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)  
Patent Owner

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Case IPR2013-00601  
Patent 6,772,215

Title: Method for Minimizing Feedback Responses in ARQ Protocols

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**DECLARATION OF ROBERT AKL, D.Sc.,  
IN SUPPORT OF PATENT OWNER'S RESPONSE**

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        “responsive to the receiving step, constructing a message field for a second data unit, said message field including a type identifier field” .....16

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        “means for sending” .....18

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**DECLARATION BY ROBERT AKL, D.Sc.,  
IN SUPPORT OF PATENT OWNER'S RESPONSE**

I, Robert Akl, D.Sc., hereby declare, affirm, and state the following:

**INTRODUCTION**

1. The facts set forth below are known to me personally and I have firsthand knowledge of them. I am a U.S. citizen over eighteen years of age. I am fully competent to testify as to the matters addressed in this Declaration. I understand that this Declaration is being submitted along with Patent Owner's response to the March 10, 2014 institution of Inter Partes Review of US Patent No. 6,772,215 (hereinafter, "the '215 Patent") by the United States Patent and Trademark Office ("USPTO") in IPR No. 2013-00601.

2. I was asked to give my opinion on whether claims 1, 2, 4, 6, 8, 15, 22, 25, 26, 29, 32, 34, 45, 46, 49, 52, and 54 ("challenged claims") of the '215 Patent are anticipated Seo. As described further below, it is my opinion that Seo does not. In particular, Seo does not disclose a "type identifier field" that is included within the "message" itself that "identifies the message type of the feedback response message from a number of different message types," as required under the proper construction of the claims.

**QUALIFICATIONS AND COMPENSATION**

3. My resume, including my qualifications, a list of the publications that I have authored during my technical career, and a list of the cases in which, during the previous four years, I have testified as an expert at trial or by deposition, is attached to this declaration as Attachment A.

4. I have summarized in this section my educational background, career history, and other relevant qualifications. A true and accurate copy of my curriculum vitae is attached hereto as Attachment A.

5. I earned my Bachelor of Science degrees in Electrical Engineering and Computer Science summa cum laude with a ranking of first in my undergraduate class from Washington University in Saint Louis in 1994. In 1996 I earned my Master of Science degree in Electrical Engineering from Washington University in Saint Louis. I earned my Doctorate of Science in Electrical Engineering from Washington University in Saint Louis in 2000, with my dissertation on “Cell Design to Maximize Capacity in Cellular Code Division Multiple Access (CDMA) Networks.”

6. After obtaining my Doctorate of Science degree, I worked as a Senior Systems Engineer at Comspace Corporation from October of 2000 to December of 2001. In this position, I designed, coded in MATLAB, and simulated Viterbi decoding, Turbo coding, trellis coded modulation (TCM), and Reed-Muller codes.

This work further entailed the optimization of soft decision parameters and interleavers for additive white Gaussian and Rayleigh faded channels.

7. In January of 2002, I joined the faculty of the University of New Orleans in Louisiana as an Assistant Professor in the Department of Electrical Engineering. While on this faculty, I designed and taught two new courses called “Computer Systems Design I and II.” I also developed a Computer Engineering Curriculum with strong hardware-design emphasis, formed a wireless research group, and advised graduate and undergraduate students.

8. In September of 2002, I received an appointment as an Assistant Professor in the Department of Computer Science and Engineering at the University of North Texas, in Denton, Texas. In May of 2008, I became a tenured Associate Professor in the Department of Computer Science and Engineering, where I continue to focus my research on wireless communication, including 4G, LTE, and wireless sensor networks. I also teach communications systems and wireless communication courses.

9. I have authored and co-authored approximately 65 journal publications, conference proceedings, technical articles, technical papers, book chapters, and technical presentations, in a broad array of communications-related technology, including networking and wireless communication. I have also developed and taught over 70 courses related to communications and computer

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