IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZTE (USA) Inc.,
Petitioner,

v.

Papst Licensing Gmbh & Co. KG,
Patent Owner.

Case No. To Be Assigned
Patent No. 9,189,437 B2

DECLARATION OF KEVIN C. ALMEROTH IN SUPPORT OF PETITION FOR INTER PARTES REVIEW OF U.S. PATENT NO. 9,189,437 UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. § 42.100 *et seq.*

I, Kevin C. Almeroth, hereby declare and state as follows:

1. I have been retained as a technical consultant on behalf of Petitioner ZTE (USA) Inc. I understand that the petition in the present proceeding also names ZTE (USA) Inc. and ZTE Corporation as the real parties-in-interest. I have no financial interest in, or affiliation with, the Petitioner, real parties-in-interest, or the patent owner, which I understand to be Papst Licensing GmbH & Co. KG. My compensation does not depend upon the outcome of, or my testimony in, the present *inter partes* review or any litigation proceedings.

2. I understand that the application leading to U.S. Patent No. 9,189,437 ("the '437 patent") was Application No. 11/467,092, which was filed on August 24, 2006. The '437 Patent is part of a long chain of continuing applications, which purport to claim priority back to PCT/EP98/01187 (filed on March 3, 1998) and German application DE 197 08 755 (filed on March 4, 1997). I understand, however, that the patentee failed to perfect its claim of priority though all of the intervening applications. In particular, while U.S. Application No. 11/078,778 was filed as a continuation of U.S. Application No. 10/219,105, it failed to claim priority to the earlier-filed U.S. Application No. 09/331,002. For purposes of my opinions in this declaration, I assume the time of the purported invention to be no earlier than August 15, 2002 (the filing date of the '105

Application).

I. BACKGROUND AND QUALIFICATIONS

3. I hold three degrees from the Georgia Institute of Technology: (1) a Bachelor of Science degree in Information and Computer Science (with minors in Economics, Technical Communication, American Literature) earned in June, 1992; (2) a Master of Science degree in Computer Science (with specialization in Networking and Systems) earned in June, 1994; and (3) a Doctor of Philosophy (Ph.D.) degree in Computer Science (Dissertation Title: Networking and System Support for the Efficient, Scalable Delivery of Services in Interactive Multimedia System, minor in Telecommunications Public Policy) earned in June, 1997. During my education, I have taken a wide variety of courses as demonstrated by my minor. My undergraduate degree also included a number of courses are more typical of a degree in electrical engineering including digital logic, signal processing, and telecommunications theory.

4. One of the major themes of my research has been the delivery of multimedia content and data between computing devices and users. In my research I have looked at large-scale content delivery systems and the use of servers located in a variety of geographic locations to provide scalable delivery to hundreds, even thousands, of users simultaneously. I have also looked at smaller-scale content delivery systems in which content, including interactive

communication like voice and video data, is exchanged between computers and portable computing devices. As a broad theme, my work has examined how to exchange content more efficiently across computer networks, including the devices that switch and route data traffic. More specific topics include the scalable delivery of content to many users, mobile computing, satellite networking, delivering content to mobile devices, and network support for data delivery in wireless network.

5. Beginning in 1992, when I started graduate school, the first focus of my research was on the provision of interactive functions (VCR-style functions like pause, rewind, and fast-forward) for near video-on-demand systems in cable systems, in particular, how to aggregate requests for movies at a cable head-end and then how to satisfy a multitude of requests using one audio/video stream broadcast to multiple receivers simultaneously. Continued evolution of this research has resulted in the development of new techniques to scalably deliver on-demand content, including audio, video, web documents, and other types of data, through the Internet and over other types of networks, including over cable systems, broadband telephone lines, and satellite links.

6. An important component of my research from the very beginning has been investigating the challenges of communicating multimedia content between computers and across networks. Although the early Internet was

designed mostly for text-based non-real time applications, the interest in sharing multimedia content quickly developed. Multimedia-based applications ranged from downloading content to a device to streaming multimedia content to be instantly used. One of the challenges was that multimedia content is typically larger than text-only content but there are also opportunities to use different delivery techniques since multimedia content is more resilient to errors. I have worked on a variety of research problems and used a number of systems that were developed to deliver multimedia content to users.

7. In 1994, I began to research issues associated with the development and deployment of a one-to-many communication facility (called "multicast") in the Internet (first deployed as the Multicast Backbone, a virtual overlay network supporting one-to-many communications). Some of my more recent research endeavors have looked at how to use the scalability offered by multicast to provide streaming media support for complex applications like distance learning, distributed collaboration, distributed games, and large-scale wireless communications. Multicast has also been used as the delivery mechanism in systems that perform local filtering (i.e., sending the same content to a large number of users and allowing them to filter locally content in which they are not interested).

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