1 RUSS, AUGUST & KABAT
   Marc A. Fenster (CA SBN 181067)
2 Reza Mirzaie (CA SBN 246953)
   Jeffrey Z.Y. Liao (CA SBN 288994)
3 Christian Conkle (CA SBN 306374)
   12424 Wilshire Boulevard, 12th Floor
4 Los Angeles, California 90025
   Telephone: (310) 826-7474
5 Facsimile: (310) 826-6991

6 Attorneys for Plaintiff
   FastVDO LLC

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8   **UNITED STATES DISTRICT COURT**

9   **SOUTHERN DISTRICT OF CALIFORNIA**

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11 FASTVDO LLC,   Case No. 3:16-cv-00385-H-WVG
                                         LEAD CASE
12 Plaintiff,
                                         Member Cases:
13   v.   16-cv-386-H (WVG)
                                         16-cv-389-H (WVG)
14 AT&T MOBILITY LLC,   16-cv-390-H (WVG)
   AT&T SERVICES, INC., and   16-cv-394-H (WVG)
15 APPLE, INC.,   16-cv-395-H (WVG)
                                         16-cv-396-H (WVG)
16 Defendants

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19   **EXPERT DECLARATION OF DR. KENNETH ZEGER**

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I. INTRODUCTION

1. I have been retained through Zunda LLC as an expert in the above captioned cases by counsel for FastVDO, LLC ("FastVDO"). I understand that FastVDO has asserted one patent in the above captioned cases: U.S. Patent No. 5,850,482 (the "asserted patent").

II. QUALIFICATIONS

2. My qualifications for forming the opinions given in this expert report are summarized here and are addressed more fully in my curriculum vitae, which is attached as a part of **Exhibit A** to this declaration. That exhibit also includes a list of my publications.

3. I have studied, taught, and practiced electrical and computer engineering for more than thirty years. I attended the Massachusetts Institute of Technology ("MIT") and earned a Bachelors (SB) and Masters (SM) of Science Degrees in Electrical Engineering and Computer Science in 1984. I earned a Masters of Arts (MA) Degree in Mathematics in 1989 from the University of California, Santa Barbara. I also earned my Ph.D. in Electrical and Computer Engineering from the University of California, Santa Barbara in 1990.

4. I am a Full Professor of Electrical and Computer Engineering at the University of California, San Diego (UCSD). I have held this position since 1998, having been promoted from Associated Professor after two years at UCSD. I teach courses full-time at UCSD in the fields of Electrical and Computer Engineering, and specifically in subfields including information theory and data compression, at the undergraduate and graduate levels. Prior to my employment at UCSD, I taught and conducted research as a faculty member at the University of Illinois, Urbana-Champaign for four years, and at the University of Hawaii for two years.

5. My twenty-plus years of industry experience include consulting work for the United States Department of Defense as well as for private companies such as Xerox, Nokia, MITRE, ADP, and Hewlett-Packard. The topics upon which I

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provide consulting expertise include image, video, and speech coding; data compression; networks; digital communications; pattern recognition; computer software; and mathematical analyses.

6.   I have authored 73 peer-reviewed journal articles, the majority of which are on the topic of compression or signal processing. I have also authored over 100 papers at various conferences and symposia over the past thirty years, such as the IEEE International Symposium on Information Theory, the International Conference on Image Processing, and the Data Compression Conference.

7.   I was elected a Fellow of the IEEE in 2000, an honor bestowed upon only a small percentage of IEEE members. I was awarded the National Science Foundation Presidential Young Investigator Award in 1991, which included $500,000 in research funding. I received this award one year after receiving my Ph.D.

8.   I have served as an Associate Editor for the IEEE Transactions on Information Theory and have been an elected member of the IEEE Information Theory Society Board of Governors for three, three-year terms. I organized and have been on the technical advisory committees of numerous workshops and symposia in the areas of image coding, information theory, and data compression. I regularly review submitted journal manuscripts, government funding requests, conference proposals, student theses, and textbook proposals. I also have given many lectures at conferences, universities, and companies on topics in image coding, data compression, and information theory.

9.   I have extensive experience in electronics hardware and computer software, from academic studies, work experience, and supervising students. I personally program computers on an almost daily basis and have fluency in many different computer languages.

10.   No part of my compensation is contingent upon the outcome of this litigation. I have no other interests in this litigation or with any of the parties.

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