



U.S. Patent No. 8,457,676 (“the ’676 patent”), U.S. Patent No. 9,025,590 (“the ’590 patent”), and U.S. Patent No. 9,078,262 (“the ’262 patent”).

### **INTRODUCTION**

Verizon proclaims that its America’s overall #1 network. Verizon competes intensely with other national carriers to win subscribers and requires advanced LTE capabilities and features to do so. Verizon boasts that it has the nation’s largest, most reliable 4G LTE network, covering over 98% of Americans. Comparing its network to competitors, Verizon claims to be #1 in call, data, speed, and reliability. (See <http://www.verizonwireless.com/> and <http://www.verizonwireless.com/landingpages/4g-lte/#coverage>, as of April 30, 2015.) The technology of the CCE patents asserted in this Complaint underlies critical features of Verizon’s LTE network and allows Verizon to make most efficient use of its extremely valuable wireless spectrum. This is necessary to compete for customers in a highly competitive market and support as many users as possible while offering them the best possible LTE cellular experience. Verizon’s ability to do so is a direct result of Verizon’s infringement of the CCE patents.

Verizon relies upon its suppliers of mobile devices and network equipment, such as those named as defendants in this Complaint, to provide the LTE user equipment and base stations that are specifically designed by Verizon and its suppliers to operate as efficiently as possible using various features of the LTE wireless standards. In providing, testing, and/or operating the hardware that Verizon utilizes or sells to customers to offer 4G LTE cellular communications, each of its suppliers, including Alcatel-Lucent, Ericsson, Apple, and HTC, also infringe the CCE patents that are the subject of this Complaint.

**THE PARTIES**

1. Cellular Communications Equipment LLC is a Texas limited liability company with its principal place of business in Plano, Texas.

2. Cellco Partnership d/b/a Verizon Wireless (“Verizon”) is a Delaware general partnership with its principal place of business in Basking Ridge, New Jersey. This Defendant may be served with process through its agent, The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801. This Defendant does business in the State of Texas and in the Eastern District of Texas.

3. Alcatel-Lucent USA, Inc. (“Alcatel”) is a Delaware corporation with its principal place of business in Murray Hill, New Jersey. This Defendant may be served with process through its agent, Prentice Hall Corporation System, 211 E. 7th Street, Suite 620, Austin, TX 78701-3218. This Defendant does business in the State of Texas and in the Eastern District of Texas.

4. Ericsson Inc. is a Delaware corporation with its headquarters and principal place of business in Plano, Texas. This Defendant may be served with process through its agent, Capitol Corporate Services, Inc., 800 Brazos, Suite 400, Austin, Texas 78701. This Defendant does business in the State of Texas and in the Eastern District of Texas.

5. Telefonaktiebolaget LM Ericsson (with Ericsson Inc., collectively “Ericsson”) is a company organized under the laws of Sweden with its principal place of business in Stockholm, Sweden. On information and belief, this Defendant may be served with process at its principal

place of business at Torshamnsgatan 21, Kista, 164 83 Stockholm, Sweden. This Defendant does business in the State of Texas and in the Eastern District of Texas.

6. Apple Inc. (“Apple”) is a California corporation with its principal place of business in Cupertino, California. This Defendant may be served with process through its agent in Texas, CT Corporation System, 1999 Bryan Street, Ste. 900; Dallas, TX 75201-3136. This Defendant does business in the State of Texas and in the Eastern District of Texas.

7. HTC Corporation is incorporated under the laws of Taiwan with its principal place of business at 23 Xinghau Road, Taoyuan City, Taoyuan 330, Taiwan, R.O.C. On information and belief, this Defendant may be served with process at its principal place of business at 23 Xinghau Road, Taoyuan City, Taoyuan 330, Taiwan, R.O.C. This Defendant does business in the State of Texas and in the Eastern District of Texas.

8. HTC America, Inc. (with HTC Corporation, collectively “HTC”) is a Washington corporation with its principal place of business at 13920 SE Eastgate Way, Suite 400, Bellevue, Washington 98005. This Defendant may be served with process through its agent in Texas, National Registered Agents, Inc., 1999 Bryan St., Ste. 900, Dallas, TX 75201-3136. This Defendant does business in the State of Texas and in the Eastern District of Texas.

### **JURISDICTION AND VENUE**

9. This action arises under the patent laws of the United States, namely 35 U.S.C. §§ 271, 281, and 284-285, among others.

10. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a), and 1367.

11. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391(b) and (c), and 1400(b). On information and belief, each Defendant is deemed to reside in this judicial

district, has committed acts of infringement in this judicial district, has purposely transacted business in this judicial district, and/or has regular and established places of business in this judicial district.

12. On information and belief, each Defendant is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to their substantial business in this State and judicial district, including: (A) at least part of their infringing activities alleged herein; and (B) regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from goods sold and services provided to Texas residents.

13. On information and belief, Defendants have significant ties to, and presence in, the State of Texas and the Eastern District of Texas, making venue in this judicial district both proper and convenient for this action. Verizon maintains offices and network operations facilities throughout Texas, including in Southlake, Texas, Westlake, Texas, Irving, Texas, Fort Worth, Texas, Richardson, Texas, and Houston, Texas. Additionally, Verizon Wireless operates retail stores throughout Texas, including at least seventeen retail stores in the Eastern District of Texas (Plano (2), Frisco, Longview, Marshall, Sherman, Texarkana, Tyler (2), Beaumont, Port Arthur, Jacksonville, Henderson, Palestine, Carthage, Kilgore, and Cleveland).

14. Alcatel-Lucent USA maintains an office in San Antonio, Texas.

15. Ericsson, Inc. maintains an office in Plano, Texas, within this District, and operates a training lab facility in Richardson, Texas. Telefonaktiebolaget LM Ericsson maintains its North American Regional headquarters in Plano, Texas, within this District, and operates a training lab facility in Richardson, Texas.

16. Apple, Inc. maintains its Americas Operation Center in Austin, Texas and also operates a microchip design center in Austin, Texas. Apple, Inc. also operates eighteen retail stores in Texas, including one in Plano, Texas and one in Frisco, Texas, both within the Eastern District of Texas.

17. HTC America, Inc. maintains an office in Houston, Texas.

18.

19. Further, Plaintiff CCE is a limited liability company located in Plano, Texas, in the Eastern District of Texas. CCE is controlled by Acacia Research Group LLC, which maintains its principal place of business in Plano, Texas. CCE's business includes the acquisition and licensing of intellectual property. Additionally, CCE's relevant documents are available in its offices in Plano, Texas.

### **COUNT I**

(INFRINGEMENT OF U.S. PATENT NO. 8,457,022)

20. CCE incorporates paragraphs 1 through 19 herein by reference.

21. CCE is the assignee of the '022 patent, entitled "Method and Apparatus for Providing Signaling of Redundancy Versions," with ownership of all substantial rights in the '022 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements. A true and correct copy of the '022 patent is attached as Exhibit A.

22. The '022 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '022 patent issued from U.S. Patent Application No. 12/564,536 (the "'536 Application").

23. Defendants Verizon, Alcatel, Ericsson, Apple, and HTC have and continue to directly and/or indirectly infringe (by inducing infringement and/or contributing to infringement) one or more claims of the '022 patent in this judicial district and elsewhere in Texas and the United States without the consent or authorization of CCE, by or through their making, having made, offering for sale, selling, importing, and/or using user equipment for Verizon's LTE network—including equipment supplied by Apple and HTC—and Verizon's base station equipment—including equipment supplied by Alcatel and Ericsson—including, for example: the Apple iPhone 5, Apple iPhone 5c, Apple iPhone 5s, Apple iPhone 6, Apple iPhone 6 Plus, Apple iPad Air, Apple iPad Air 2, Apple iPad Mini, Apple iPad Mini 2, Apple iPad Mini 3, Apple iPad Mini with Retina Display, Apple iPad 3, Apple iPhone 6s, Apple iPhone 6s Plus, Apple iPad Pro, Apple iPad Mini 4, HTC Desire 612, HTC Droid DNA, HTC Droid Incredible 4G, HTC One (M7), HTC One (M8), HTC One (M8) Windows, HTC One M9, HTC One Max, HTC One Remix (mini 2), HTC Rezound, HTC Thunderbolt, HTC Windows Phone 8X, HTC Desire 626, HTC Desire 526, Ellipsis 10, Ellipsis Kids, and Ellipsis 8 compatible with the Verizon LTE cellular network and made, used, sold, offered for sale, imported or otherwise distributed by or through Verizon and/or its suppliers for use on Verizon's LTE network (the "Verizon User Equipment"); and the Alcatel-Lucent 9768, Alcatel-Lucent 9100 Multi-Standard Base Station, Alcatel-Lucent 9412 eNodeB Compact, Alcatel-Lucent lightRadio 9711, Alcatel-Lucent lightRadio 9712, Alcatel-Lucent 9768, Alcatel-Lucent Evercore LTE 400 PMR, Alcatel-Lucent Multi-Carrier Remote Radio Head, and Ericsson RBS 6000 series, compatible with the Verizon LTE cellular network and made, used, sold, offered for sale, imported, and/or operated by or through Verizon and/or its suppliers for use in Verizon's LTE network (the "Verizon Base Stations"). These devices are collectively referred to as the "Verizon LTE User Equipment and Network Equipment."

24. Defendants directly infringe the apparatus claims of the '022 patent by making, using, offering to sell, selling, and/or importing the Verizon LTE User Equipment and Network Equipment. Defendants also directly infringe the '022 patent by making, using, selling, offering for sale, and/or importing the Verizon LTE User Equipment and Network Equipment to practice the claimed methods. Defendants are thereby liable for direct infringement.

25. On information and belief, each Defendant, or an affiliated entity, is a 3rd Generation Partnership Project (or "3GPP") member organization, or is affiliated with a 3GPP member organization. 3GPP solicits identification of standard essential patents, and, through 3GPP, Defendants received actual notice of the standard essential patents at issue here. The '022 patent is one such patent, and Defendants have known of the '022 patent; the '536 Application; and/or the fact that the '022 patent's disclosure would be the subject of patent protection at least as early as December 2012, when it was disclosed to 3GPP via the European Telecommunications Standards Institute ("ETSI," an organizational member of 3GPP). Alternatively, each Defendant has had knowledge of the '022 patent, at least as early as service of the First Amended Complaint in this action. *See, e.g., Patent Harbor, LLC v. Dreamworks Animation SKG, Inc.*, No. 6:11-cv-229, 2012 U.S. Dist. LEXIS 114199, at \*17 (E.D. Tex. Jul. 27, 2012).

26. Additionally, Defendants are liable for indirect infringement of the '022 patent because they induce and/or contribute to the direct infringement of the patent by their customers (including Verizon by its suppliers) and other end users who use the Verizon LTE User Equipment and Network Equipment to practice the claimed methods. On information and belief, as set forth above, Defendants had knowledge of the '022 patent; the '536 Application; and/or the fact that the '022 patent's disclosure would be the subject of patent protection at least as early as December

2012. And since that time, Defendants have specifically intended and continue to specifically intend for persons who acquire and use the Verizon LTE User Equipment and Network Equipment, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes the '022 patent. In the alternative, Defendants have had knowledge of the '022 patent, at least as early as service of the First Amended Complaint in this action. And since that time, Defendants have specifically intended and continue to specifically intend for persons who acquire and use the Verizon LTE User Equipment and Network Equipment, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes the '022 patent.

27. Despite having knowledge of the '022 patent, Defendants named in this Count have specifically intended and continue to specifically intend for persons who acquire and use the Verizon LTE User Equipment and Network Equipment, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes one or more of the claims of the '022 patent. This is evident when Defendants encourage and instruct customers and other end users in the use and operation of the Verizon LTE User Equipment and Network Equipment via advertisement and instructional materials.

28. In particular, despite having knowledge of the '022 patent, Defendants have provided, and continue to provide, instructional materials, such as user guides, owner manuals, and similar online resources (available, for example, via <http://www.verizonwireless.com/support/>, <http://support.apple.com/manuals/>, <http://www.htc.com/us/support/>, and other instructional materials and documentation provided or made available by Defendants to customers after purchase) that specifically teach the customers and other end users to use the Verizon LTE User Equipment and Network Equipment in an

infringing manner. By providing such instructions, Defendants know (and have known), or should know (and should have known), that their actions have, and continue to, actively induce infringement.

29. Additionally, Defendants named in this Count know, and have known, that the Verizon LTE User Equipment and Network Equipment include proprietary hardware components and software instructions that work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these hardware and software combinations, are a material part of the inventions of the '022 patent and are not staple articles of commerce suitable for substantial non-infringing use.

30. Specifically, each of the Verizon User Equipment contains at least a baseband processor implementing, in combination with software instructions, functionality that is specifically programmed and/or configured to detect start of a system information message transmission window and to assign a redundancy version sequence at the start of the transmission window as claimed in the '022 patent. Upon information and belief, the Verizon User Equipment contains discrete code that uniquely provides this functionality. The code, which is configured to control the baseband processor and other components for performing these functions, is a material part of the inventions of the '022 patent and there is no substantial non-infringing use for this combination of hardware and software components.

31. Specifically, each of the Verizon Base Stations contains at least a baseband processor implementing, in combination with software instructions, functionality that is specifically programmed and/or configured to detect start of a system information message transmission window and to assign a redundancy version sequence at the start of the transmission window as claimed in the '022 patent. Upon information and belief, the Verizon Base Stations

contain discrete code that uniquely provides this functionality. The code, which is configured to control the baseband processor and other components for performing these functions, is a material part of the inventions of the '022 patent and there is no substantial non-infringing use for this combination of hardware and software components.

32. On information and belief, despite having knowledge of the '022 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '022 patent, Defendants named in this Count have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement; thus, Defendants' infringing activities relative to the '022 patent have been, and continue to be, willful, wanton, and deliberate in disregard of CCE's rights.

33. On information and belief, Verizon along with its suppliers, Alcatel, Ericsson, Apple, and HTC, test, make, use, offer for sale, sell, and/or import the Verizon LTE User Equipment and Network Equipment described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution, sale, and operation of such devices. Accordingly, Verizon, Alcatel, Ericsson, Apple, and HTC are jointly, severally, or alternatively liable for infringements described in this Count.

34. CCE has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to CCE in an amount that adequately compensates CCE for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

## **COUNT II**

(INFRINGEMENT OF U.S. PATENT NO. 8,570,957)

35. CCE incorporates paragraphs 1 through 19 herein by reference.

36. CCE is the assignee of the '957 patent, entitled "Extension of Power Headroom Reporting and Trigger Conditions," with ownership of all substantial rights in the '957 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements. A true and correct copy of the '957 patent is attached as Exhibit B.

37. The '957 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '957 patent issued from U.S. Patent Application No. 12/382,920 (the "'920 Application").

38. Defendants Verizon, Alcatel, Ericsson, Apple, and HTC have and continue to directly and/or indirectly infringe (by inducing infringement and/or contributing to infringement) one or more claims of the '957 patent in this judicial district and elsewhere in Texas and the United States without the consent or authorization of CCE, by or through their making, having made, offering for sale, selling, importing, and/or using user equipment for Verizon's LTE network—including equipment supplied by Apple and HTC—and Verizon's base station equipment—including equipment supplied by Alcatel and Ericsson—including, for example: the Apple iPhone 5, Apple iPhone 5c, Apple iPhone 5s, Apple iPhone 6, Apple iPhone 6 Plus, Apple iPad Air, Apple iPad Air 2, Apple iPad Mini, Apple iPad Mini 2, Apple iPad Mini 3, Apple iPad Mini with Retina Display, Apple iPad 3, Apple iPhone 6s, Apple iPhone 6s Plus, Apple iPad Pro, Apple iPad Mini 4, HTC Desire 612, HTC Droid DNA, HTC Droid Incredible 4G, HTC One (M7), HTC One (M8), HTC One (M8) Windows, HTC One M9, HTC One Max, HTC One Remix (mini 2), HTC Rezound, HTC Thunderbolt, HTC Windows Phone 8X, HTC Desire 626, HTC Desire 526, Ellipsis 10, Ellipsis Kids, and Ellipsis 8 compatible with the Verizon LTE cellular network and made, used, sold, offered for sale, imported or otherwise distributed by or through Verizon and/or its suppliers for use on Verizon's LTE network (the "Verizon User Equipment"); and the

Alcatel-Lucent 9768, Alcatel-Lucent 9100 Multi-Standard Base Station, Alcatel-Lucent 9412 eNodeB Compact, Alcatel-Lucent lightRadio 9711, Alcatel-Lucent lightRadio 9712, Alcatel-Lucent 9768, Alcatel-Lucent Evercore LTE 400 PMR, Alcatel-Lucent Multi-Carrier Remote Radio Head, and Ericsson RBS 6000 series, compatible with the Verizon LTE cellular network and made, used, sold, offered for sale, imported, and/or operated by or through Verizon and/or its suppliers for use in Verizon's LTE network (the "Verizon Base Stations"). These devices are collectively referred to as the "Verizon LTE User Equipment and Network Equipment."

39. Defendants directly infringe the apparatus claims of the '957 patent by making, using, offering to sell, selling, and/or importing the Verizon LTE User Equipment and Network Equipment. Defendants also directly infringe the '957 patent by making, using, selling, offering for sale, and/or importing the Verizon LTE User Equipment and Network Equipment to practice the claimed methods. Defendants are thereby liable for direct infringement.

40. On information and belief, each Defendant, or an affiliated entity, is a 3rd Generation Partnership Project (or "3GPP") member organization, or is affiliated with a 3GPP member organization. 3GPP solicits identification of standard essential patents, and, through 3GPP, Defendants received actual notice of the standard essential patents at issue here. The '957 patent is one such patent, and Defendants have known of the '957 patent; the '920 Application; and/or the fact that the '957 patent's disclosure would be the subject of patent protection at least as early as August 2010, when it was disclosed to 3GPP via the European Telecommunications Standards Institute ("ETSI," an organizational member of 3GPP). Alternatively, each Defendant has had knowledge of the '957 patent, at least as early as service of the First Amended Complaint in this action. *See, e.g., Patent Harbor, LLC v. Dreamworks Animation SKG, Inc.*, No. 6:11-cv-229, 2012 U.S. Dist. LEXIS 114199, at \*17 (E.D. Tex. Jul. 27, 2012).

41. Additionally, Defendants are liable for indirect infringement of the '957 patent because they induce and/or contribute to the direct infringement of the patent by their customers (including Verizon by its suppliers) and other end users who use the Verizon LTE User Equipment and Network Equipment to practice the claimed methods. On information and belief, as set forth above, Defendants had knowledge of the '957 patent; the '920 Application; and/or the fact that the '957 patent's disclosure would be the subject of patent protection at least as early as August 2010. And since that time, Defendants have specifically intended and continue to specifically intend for persons who acquire and use the Verizon LTE User Equipment and Network Equipment, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes the '957 patent. In the alternative, Defendants have had knowledge of the '957 patent, at least as early as service of the First Amended Complaint in this action. And since that time, Defendants have specifically intended and continue to specifically intend for persons who acquire and use the Verizon LTE User Equipment and Network Equipment, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes the '957 patent.

42. Despite having knowledge of the '957 patent, Defendants named in this Count have specifically intended and continue to specifically intend for persons who acquire and use the Verizon LTE User Equipment and Network Equipment, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes one or more claims of the '957 patent. This is evident when Defendants encourage and instruct customers and other end users in the use and operation of the Verizon LTE User Equipment and Network Equipment via advertisement and instructional materials.

43. In particular, despite having knowledge of the '957 patent, Defendants have provided, and continue to provide, instructional materials, such as user guides, owner manuals, and similar online resources (available, for example, via <http://www.verizonwireless.com/support/>, <http://support.apple.com/manuals/>, <http://www.htc.com/us/support/>, and other instructional materials and documentation provided or made available by Defendants to customers after purchase) that specifically teach the customers and other end users to use the Verizon LTE User Equipment and Network Equipment in an infringing manner. By providing such instructions, Defendants know (and have known), or should know (and should have known), that their actions have, and continue to, actively induce infringement.

44. Additionally, Defendants named in this Count know, and have known, that the Verizon LTE User Equipment and Network Equipment include proprietary hardware components and software instructions that work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these hardware and software combinations, are a material part of the inventions of the '957 patent and are not staple articles of commerce suitable for substantial non-infringing use.

45. Specifically, each of the Verizon User Equipment contains at least a transceiver and a baseband processor implementing, in combination with software instructions, functionality that is specifically programmed and/or configured to determine and transmit a power headroom report with both positive and negative values of power headroom as claimed in the '957 patent. Upon information and belief, the Verizon User Equipment contains discrete code that uniquely provides this functionality. The code, which is configured to control the baseband processor, transceiver, and other components for performing these functions, is a material part of the inventions of the

'957 patent and there is no substantial non-infringing use for this combination of hardware and software components.

46. Specifically, each of the Verizon Base Stations contains at least a transceiver and a baseband processor implementing, in combination with software instructions, functionality that is specifically programmed and/or configured to receive a power headroom report with both positive and negative values of power headroom and allocate radio network resources based on the power headroom report, as claimed in the '957 patent. Upon information and belief, the Verizon Base Stations contain discrete code that uniquely provides this functionality. The code, which is configured to control the baseband processor, transceiver, and other components for performing these functions, is a material part of the inventions of the '957 patent and there is no substantial non-infringing use for this combination of hardware and software components.

47. On information and belief, despite having knowledge of the '957 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '957 patent, Defendants named in this Count have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement; thus, Defendants' infringing activities relative to the '957 patent have been, and continue to be, willful, wanton, and deliberate in disregard of CCE's rights.

48. On information and belief, Verizon along with its suppliers, Alcatel, Ericsson, Apple, and HTC, test, make, use, offer for sale, sell, and/or import the Verizon LTE User Equipment and Network Equipment described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution, sale, and operation of such devices. Accordingly, Verizon, Alcatel, Ericsson, Apple, and HTC are jointly, severally, or alternatively liable for infringements described in this Count.

49. CCE has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to CCE in an amount that adequately compensates CCE for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

**COUNT III**

(INFRINGEMENT OF U.S. PATENT NO. 8,867,472)

50. CCE incorporates paragraphs 1 through 19 herein by reference.

51. CCE is the assignee of the '472 patent, entitled "Signalling of Channel Information," with ownership of all substantial rights in the '472 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements. A true and correct copy of the '472 patent is attached as Exhibit C.

52. The '472 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '472 patent issued from U.S. Patent Application No. 13/637,222, which claims priority to PCT/EP2010/053919 (with U.S. Patent Application No. 13/637,222 the "'222 Application").

53. Defendants Verizon, Alcatel, Ericsson, Apple, and HTC have and continue to directly and/or indirectly infringe (by inducing infringement and/or contributing to infringement) one or more claims of the '472 patent in this judicial district and elsewhere in Texas and the United States without the consent or authorization of CCE, by or through their making, having made, offering for sale, selling, importing, and/or using user equipment for Verizon's LTE network—including equipment supplied by Apple and HTC—and Verizon's base station equipment—including equipment supplied by Alcatel and Ericsson—including, for example: the Apple iPhone 5, Apple iPhone 5c, Apple iPhone 5s, Apple iPhone 6, Apple iPhone 6 Plus, Apple

iPad Air, Apple iPad Air 2, Apple iPad Mini, Apple iPad Mini 2, Apple iPad Mini 3, Apple iPad Mini with Retina Display, Apple iPad 3, Apple iPhone 6s, Apple iPhone 6s Plus, Apple iPad Pro, Apple iPad Mini 4, HTC Desire 612, HTC Droid DNA, HTC Droid Incredible 4G, HTC One (M7), HTC One (M8), HTC One (M8) Windows, HTC One M9, HTC One Max, HTC One Remix (mini 2), HTC Rezound, HTC Thunderbolt, HTC Windows Phone 8X, HTC Desire 626, HTC Desire 526, Ellipsis 10, Ellipsis Kids, and Ellipsis 8 compatible with the Verizon LTE cellular network and made, used, sold, offered for sale, imported or otherwise distributed by or through Verizon and/or its suppliers for use on Verizon's LTE network (the "Verizon User Equipment"); and the Alcatel-Lucent 9768, Alcatel-Lucent 9100 Multi-Standard Base Station, Alcatel-Lucent 9412 eNodeB Compact, Alcatel-Lucent lightRadio 9711, Alcatel-Lucent lightRadio 9712, Alcatel-Lucent 9768, Alcatel-Lucent Evercore LTE 400 PMR, Alcatel-Lucent Multi-Carrier Remote Radio Head, and Ericsson RBS 6000 series, compatible with the Verizon LTE cellular network and made, used, sold, offered for sale, imported, and/or operated by or through Verizon and/or its suppliers for use in Verizon's LTE network (the "Verizon Base Stations"). These devices are collectively referred to as the "Verizon LTE User Equipment and Network Equipment."

54. Defendants directly infringe the apparatus claims of the '472 patent by making, using, offering to sell, selling, and/or importing the Verizon LTE User Equipment and Network Equipment. Defendants also directly infringe the '472 patent by making, using, selling, offering for sale, and/or importing the Verizon LTE User Equipment and Network Equipment to practice the claimed methods. Defendants are thereby liable for direct infringement.

55. On information and belief, each Defendant, or an affiliated entity, is a 3rd Generation Partnership Project (or "3GPP") member organization, or is affiliated with a 3GPP member organization. 3GPP solicits identification of standard essential patents, and, through

3GPP, the Defendants received actual notice of the standard essential patents at issue here. The '472 patent is one such patent, and the Defendants have known of the '472 patent; the '222 Application; and/or the fact that the '472 patent's disclosure would be the subject of patent protection at least as early as at least as early as March 2013, when it was disclosed to 3GPP via the European Telecommunications Standards Institute ("ETSI," an organizational member of 3GPP). Alternatively, each Defendant has had knowledge of the '472 patent, at least as early as service of the First Amended Complaint in this action. *See, e.g., Patent Harbor, LLC v. Dreamworks Animation SKG, Inc.*, No. 6:11-cv-229, 2012 U.S. Dist. LEXIS 114199, at \*17 (E.D. Tex. Jul. 27, 2012).

56. Additionally, Defendants are liable for indirect infringement of the '472 patent because they induce and/or contribute to the direct infringement of the patent by their customers (including Verizon by its suppliers) and other end users who use the Verizon LTE User Equipment and Network Equipment to practice the claimed methods. On information and belief, as set forth above, Defendants had knowledge of the '472 patent; the '222 Application; and/or the fact that the '472 patent's disclosure would be the subject of patent protection at least as early as March 2013. And since that time, Defendants have specifically intended and continue to specifically intend for persons who acquire and use the Verizon LTE User Equipment and Network Equipment, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes the '472 patent. In the alternative, Defendants have had knowledge of the '472 patent, at least as early as service of the First Amended Complaint in this action. And since that time, Defendants have specifically intended and continue to specifically intend for persons who acquire and use the Verizon LTE User Equipment and Network Equipment,

including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes the '472 patent.

57. Despite having knowledge of the '472 patent, Defendants named in this Count have specifically intended and continue to specifically intend for persons who acquire and use the Verizon LTE User Equipment and Network Equipment, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes one or more claims of the '472 patent. This is evident when Defendants encourage and instruct customers and other end users in the use and operation of the Verizon LTE User Equipment and Network Equipment via advertisement and instructional materials.

58. In particular, despite having knowledge of the '472 patent, Defendants have provided, and continue to provide, instructional materials, such as user guides, owner manuals, and similar online resources (available, for example, via <http://www.verizonwireless.com/support/>, <http://support.apple.com/manuals/>, <http://www.htc.com/us/support/>, and other instructional materials and documentation provided or made available by Defendants to customers after purchase) that specifically teach the customers and other end users to use the Verizon LTE User Equipment and Network Equipment in an infringing manner. By providing such instructions, Defendants know (and have known), or should know (and should have known), that their actions have, and continue to, actively induce infringement.

59. Additionally, Defendants named in this Count know, and have known, that the Verizon LTE User Equipment and Network Equipment include proprietary hardware components and software instructions that work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these hardware and software combinations, are a

material part of the inventions of the '472 patent and are not staple articles of commerce suitable for substantial non-infringing use.

60. Specifically, each of the Verizon User Equipment contains at least a transceiver and a baseband processor implementing, in combination with software instructions, functionality that is specifically programmed and/or configured to receive a request for providing aperiodic channel information, determine and send the channel information for the selected downlink component carrier, as claimed in the '472 patent. Upon information and belief, the Verizon User Equipment contains discrete code that uniquely provides this functionality. The code, which is configured to control the baseband processor, transceiver, and other components for performing these functions, is a material part of the inventions of the '472 patent and there is no substantial non-infringing use for this combination of hardware and software components.

61. Specifically, each of the Verizon Base Stations contains at least a transceiver and a baseband processor implementing, in combination with software instructions, functionality that is specifically programmed and/or configured to generate and send a request for providing aperiodic channel information for a selected downlink component carrier, as claimed in the '472 patent. Upon information and belief, the Verizon Base Stations contain discrete code that uniquely provides this functionality. The code, which is configured to control the baseband processor, transceiver, and other components for performing these functions, is a material part of the inventions of the '472 patent and there is no substantial non-infringing use for this combination of hardware and software components.

62. On information and belief, despite having knowledge of the '472 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '472 patent, Defendants named in this Count have nevertheless continued their infringing conduct and

disregarded an objectively high likelihood of infringement; thus, Defendants' infringing activities relative to the '472 patent have been, and continue to be, willful, wanton, and deliberate in disregard of CCE's rights.

63. On information and belief, Verizon along with its suppliers, Alcatel, Ericsson, Apple, and HTC, test, make, use, offer for sale, sell, and/or import the Verizon LTE User Equipment and Network Equipment described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution, sale, and operation of such devices. Accordingly, Verizon, Alcatel, Ericsson, Apple, and HTC are jointly, severally, or alternatively liable for infringements described in this Count.

64. CCE has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to CCE in an amount that adequately compensates CCE for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

#### **COUNT IV**

(INFRINGEMENT OF U.S. PATENT NO. 8,457,676)

65. CCE incorporates paragraphs 1 through 19 herein by reference.

66. CCE is the assignee of the '676 patent, entitled "Power Headroom Reporting Method," with ownership of all substantial rights in the '676 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements. A true and correct copy of the '676 patent is attached as Exhibit D.

67. The '676 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code. The '676 patent issued from U.S. Patent Application No.

12/665,427, which claims priority to PCT/FI2008/050384 (with U.S. Patent Application No. 13/637,222 the “’427 Application”).

68. Defendants Verizon, Alcatel, Apple, and HTC (“the ’676 Defendants”) have and continue to directly and/or indirectly infringe (by inducing infringement and/or contributing to infringement) one or more claims of the ’676 patent in this judicial district and elsewhere in Texas and the United States without the consent or authorization of CCE, by or through their making, having made, offering for sale, selling, importing, and/or using user equipment for Verizon’s LTE network—including equipment supplied by Apple and HTC—and Verizon’s base station equipment—including equipment supplied by Alcatel—including, for example: the Apple iPhone 5, Apple iPhone 5c, Apple iPhone 5s, Apple iPhone 6, Apple iPhone 6 Plus, Apple iPad Air, Apple iPad Air 2, Apple iPad Mini, Apple iPad Mini 2, Apple iPad Mini 3, Apple iPad Mini with Retina Display, Apple iPad 3, Apple iPhone 6s, Apple iPhone 6s Plus, Apple iPad Pro, Apple iPad Mini 4, HTC Desire 612, HTC Droid DNA, HTC Droid Incredible 4G, HTC One (M7), HTC One (M8), HTC One (M8) Windows, HTC One M9, HTC One Max, HTC One Remix (mini 2), HTC Rezound, HTC Thunderbolt, HTC Windows Phone 8X, HTC Desire 626, HTC Desire 526, Ellipsis 10, Ellipsis Kids, and Ellipsis 8, compatible with the Verizon LTE cellular network and made, used, sold, offered for sale, imported or otherwise distributed by or through Verizon and/or its suppliers for use on Verizon’s LTE network (the “Verizon User Equipment”); and the Alcatel-Lucent 9768, Alcatel-Lucent 9100 Multi-Standard Base Station, Alcatel-Lucent 9412 eNodeB Compact, Alcatel-Lucent lightRadio 9711, Alcatel-Lucent lightRadio 9712, Alcatel-Lucent 9768, Alcatel-Lucent Evercore LTE 400 PMR, and Alcatel-Lucent Multi-Carrier Remote Radio Head, compatible with the Verizon LTE cellular network and made, used, sold, offered for sale, imported, and/or operated by or through Verizon and/or its suppliers for use in Verizon’s LTE

network (the “Verizon ’676 Base Stations”). These devices are collectively referred to as the “Verizon ’676 LTE User Equipment and Network Equipment.”

69. The ’676 Defendants directly infringe the apparatus claims of the ’676 patent by making, using, offering to sell, selling, and/or importing the Verizon ’676 LTE User Equipment and Network Equipment. The ’676 Defendants also directly infringe the ’676 patent by making, using, selling, offering for sale, and/or importing the Verizon ’676 LTE User Equipment and Network Equipment to practice the claimed methods. The ’676 Defendants are thereby liable for direct infringement.

70. On information and belief, each ’676 Defendant, or an affiliated entity, is a 3rd Generation Partnership Project (or “3GPP”) member organization, or is affiliated with a 3GPP member organization. 3GPP solicits identification of standard essential patents, and, through 3GPP, the ’676 Defendants received actual notice of the standard essential patents at issue here. The ’676 patent is one such patent, and the ’676 Defendants have known of the ’676 patent; the ’427 Application; and/or the fact that the ’676 patent’s disclosure would be the subject of patent protection at least as early as December 2012, when it was disclosed to 3GPP via the European Telecommunications Standards Institute (“ETSI,” an organizational member of 3GPP). Alternatively, each ’676 Defendant has had knowledge of the ’676 patent, at least as early as service of the First Amended Complaint in this action. *See, e.g., Patent Harbor, LLC v. Dreamworks Animation SKG, Inc.*, No. 6:11-cv-229, 2012 U.S. Dist. LEXIS 114199, at \*17 (E.D. Tex. Jul. 27, 2012).

71. Additionally, the ’676 Defendants are liable for indirect infringement of the ’676 patent because they induce and/or contribute to the direct infringement of the patent by their customers (including Verizon by its suppliers) and other end users who use the Verizon ’676 LTE

User Equipment and Network Equipment to practice the claimed methods. On information and belief, as set forth above, the '676 Defendants had knowledge of the '676 patent; the '427 Application; and/or the fact that the '676 patent's disclosure would be the subject of patent protection at least as early as December 2012. And since that time, the '676 Defendants have specifically intended and continue to specifically intend for persons who acquire and use the Verizon '676 LTE User Equipment and Network Equipment, including the '676 Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes the '676 patent. In the alternative, the '676 Defendants have had knowledge of the '676 patent, at least as early as service of the First Amended Complaint in this action. And since that time, the '676 Defendants have specifically intended and continue to specifically intend for persons who acquire and use the Verizon LTE User Equipment and Network Equipment, including the '676 Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes the '676 patent.

72. Despite having knowledge of the '676 patent, the '676 Defendants named in this Count have specifically intended and continue to specifically intend for persons who acquire and use the Verizon '676 LTE User Equipment and Network Equipment, including the '676 Defendants' customers (e.g., mobile device users, Verizon etc.), to use such devices in a manner that infringes one or more claims of the '676 patent. This is evident when the '676 Defendants encourage and instruct customers and other end users in the use and operation of the Verizon '676 LTE User Equipment and Network Equipment via advertisement and instructional materials.

73. In particular, despite having knowledge of the '676 patent, the '676 Defendants have provided, and continue to provide, instructional materials, such as user guides, owner manuals, and similar online resources (available for example, via

<http://www.verizonwireless.com/support/>,

<http://support.apple.com/manuals/>,

<http://www.htc.com/us/support/>, and other instructional materials and documentation provided or made available by the '676 Defendants to customers after purchase) that specifically teach the customers and other end users to use the Verizon '676 LTE User Equipment and Network Equipment in an infringing manner. By providing such instructions, the '676 Defendants know (and have known), or should know (and should have known), that their actions have, and continue to, actively induce infringement.

74. Additionally, the '676 Defendants named in this Count know, and have known, that the Verizon '676 LTE User Equipment and Network Equipment include proprietary hardware components and software instructions that work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these hardware and software combinations, are a material part of the inventions of the '676 patent and are not staple articles of commerce suitable for substantial non-infringing use.

75. Specifically, each of the Verizon User Equipment contains at least a transceiver and a baseband processor implementing, in combination with software instructions, functionality that is specifically programmed and/or configured to provide a power control headroom report in response to determining that asset of at least one triggering criterion is met, as claimed in the '676 patent. Upon information and belief, the Verizon User Equipment contains discrete code that uniquely provides this functionality. The code, which is configured to control the baseband processor, transceiver, and other components for performing these functions, is a material part of the inventions of the '676 patent and there is no substantial non-infringing use for this combination of hardware and software components.

76. Specifically, each of the Verizon '676 Base Stations contains at least a transceiver and a baseband processor implementing, in combination with software instructions, functionality that is specifically programmed and/or configured to receive a power control headroom report in response to the user equipment determining that a set of at least one triggering criterion is met, as claimed in the '676 patent. Upon information and belief, the Verizon '676 Base Stations contain discrete code that uniquely provides this functionality. The code, which is configured to control the baseband processor, transceiver, and other components for performing these functions, is a material part of the inventions of the '676 patent and there is no substantial non-infringing use for this combination of hardware and software components.

77. On information and belief, despite having knowledge of the '676 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '676 patent, Defendants named in this Count have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement; thus, Defendants' infringing activities relative to the '676 patent have been, and continue to be, willful, wanton, and deliberate in disregard of CCE's rights.

78. On information and belief, Verizon along with its suppliers, Alcatel, Apple, and HTC, test, make, use, offer for sale, sell, and/or import the Verizon '676 LTE User Equipment and Network Equipment described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution, sale, and operation of such devices. Accordingly, Verizon, Alcatel, Apple, and HTC are jointly, severally, or alternatively liable for infringements described in this Count.

79. CCE has been damaged as a result of the '676 Defendants' infringing conduct described in this Count. The '676 Defendants are, thus, liable to CCE in an amount that adequately

compensates CCE for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

**COUNT V**

(INFRINGEMENT OF U.S. PATENT NO. 9,025,590)

80. CCE incorporates paragraphs 1 through 19 herein by reference.

81. CCE is the assignee of the '590 patent, entitled "Carrier Aggregation with Power Headroom Report," with ownership of all substantial rights in the '590 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements. A true and correct copy of the '590 patent is attached as Exhibit E.

82. The '590 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

83. Defendants Verizon, Alcatel, and Ericsson have and continue to directly and/or indirectly infringe (by inducing infringement and/or contributing to infringement) one or more claims of the '590 patent in this judicial district and elsewhere in Texas and the United States without the consent or authorization of CCE, by or through their making, having made, offering for sale, selling, importing, and/or using Verizon's base station equipment—including equipment supplied by Alcatel and Ericsson—including, for example: the Alcatel-Lucent 9768, Alcatel-Lucent 9100 Multi-Standard Base Station, Alcatel-Lucent 9412 eNodeB Compact, Alcatel-Lucent lightRadio 9711, Alcatel-Lucent lightRadio 9712, Alcatel-Lucent 9768, Alcatel-Lucent Evercore LTE 400 PMR, Alcatel-Lucent Multi-Carrier Remote Radio Head, and Ericsson RBS 6000 series, compatible with the Verizon LTE cellular network and made, used, sold, offered for sale, imported, and/or operated by or through Verizon and/or its suppliers for use in Verizon's LTE network (the "Verizon Base Stations").

84. Defendants directly infringe the apparatus claims of the '590 patent by making, using, offering to sell, selling, and/or importing the Verizon Base Stations. Defendants also directly infringe the '590 patent by making, using, selling, offering for sale, and/or importing the Verizon Base Stations to practice the claimed methods. Defendants are thereby liable for direct infringement.

85. Additionally, Defendants are liable for indirect infringement of the '590 patent because they induce and/or contribute to the direct infringement of the patent by their customers (including Verizon by its suppliers) and other end users who use the Verizon Base Stations to practice the claimed methods. Defendants have specifically intended and continue to specifically intend for persons who acquire and use the Verizon Base Stations, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes the '590 patent.

86. Each Defendant has had knowledge of the '590 patent, at least as early as service of the First Amended Complaint in this action. *See, e.g., Patent Harbor, LLC v. Dreamworks Animation SKG, Inc.*, No. 6:11-cv-229, 2012 U.S. Dist. LEXIS 114199, at \*17 (E.D. Tex. Jul. 27, 2012).

87. Despite having knowledge of the '590 patent, Defendants named in this Count have specifically intended and continue to specifically intend for persons who acquire and use the Verizon Base Stations, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes one or more claims of the '590 patent. This is evident when Defendants encourage and instruct customers and other end users in the use and operation of the Verizon Base Stations via advertisement and instructional materials.

88. In particular, despite having knowledge of the '590 patent, Defendants have provided, and continue to provide, instructional materials, such as user guides, owner manuals, and similar online resources (available for example, via <http://www.verizonwireless.com/support/> and other instructional materials and documentation provided or made available by Defendants to customers after purchase) that specifically teach the customers and other end users to use the Verizon Base Stations in an infringing manner. By providing such instructions, Defendants know (and have known), or should know (and should have known), that their actions have, and continue to, actively induce infringement.

89. Additionally, Defendants named in this Count know, and have known, that the Verizon Base Stations include proprietary hardware components and software instructions that work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these hardware and software combinations, are a material part of the inventions of the '590 patent and are not staple articles of commerce suitable for substantial non-infringing use.

90. Specifically, each of the Verizon Base Stations contains at least a transceiver and a baseband processor implementing, in combination with software instructions, functionality that is specifically programmed and/or configured to configure a user equipment to send a power headroom report control element including a bitmap that indicates power headroom reports being reported and receive and process the power headroom report control element, as claimed in the '590 patent. Upon information and belief, the Verizon Base Stations contain discrete code that uniquely provides this functionality. The code, which is configured to control the baseband processor, transceiver, and other components for performing these functions, is a material part of the inventions of the '590 patent and there is no substantial non-infringing use for this combination of hardware and software components.

91. On information and belief, despite having knowledge of the '590 patent since at least the filing of the First Amended Complaint in this action and knowledge that they are directly and/or indirectly infringing one or more claims of the '590 patent since at least the filing of the First Amended Complaint in this action, Defendants named in this Count have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement; thus, Defendants' infringing activities relative to the '590 patent have been, and continue to be, willful, wanton, and deliberate in disregard of CCE's rights.

92. On information and belief, Verizon along with its suppliers, Alcatel and Ericsson, test, make, use, offer for sale, sell, and/or import the Verizon Base Stations described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution, sale, and operation of such devices. Accordingly, Verizon, Alcatel, and Ericsson are jointly, severally, or alternatively liable for infringements described in this Count.

93. CCE has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to CCE in an amount that adequately compensates CCE for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

## **COUNT VI**

(INFRINGEMENT OF U.S. PATENT NO. 9,078,262)

94. CCE incorporates paragraphs 1 through 19 herein by reference.

95. CCE is the assignee of the '262 patent, entitled "Signalling of Channel Information," with ownership of all substantial rights in the '262 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringements. A true and correct copy of the '262 patent is attached as Exhibit F.

96. The '262 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

97. Defendants Verizon, Alcatel, and Ericsson have and continue to directly and/or indirectly infringe (by inducing infringement and/or contributing to infringement) one or more claims of the '262 patent in this judicial district and elsewhere in Texas and the United States without the consent or authorization of CCE, by or through their making, having made, offering for sale, selling, importing, and/or using Verizon's base station equipment—including equipment supplied by Alcatel and Ericsson—including, for example: the Alcatel-Lucent 9768, Alcatel-Lucent 9100 Multi-Standard Base Station, Alcatel-Lucent 9412 eNodeB Compact, Alcatel-Lucent lightRadio 9711, Alcatel-Lucent lightRadio 9712, Alcatel-Lucent 9768, Alcatel-Lucent Evercore LTE 400 PMR, Alcatel-Lucent Multi-Carrier Remote Radio Head, and Ericsson RBS 6000 series, compatible with the Verizon LTE cellular network and made, used, sold, offered for sale, imported, and/or operated by or through Verizon and/or its suppliers for use in Verizon's LTE network (the "Verizon Base Stations").

98. Defendants directly infringe the apparatus claims of the '262 patent by making, using, offering to sell, selling, and/or importing the Verizon Base Stations. Defendants also directly infringe the '262 patent by making, using, selling, offering for sale, and/or importing the Verizon Base Stations to practice the claimed methods. Defendants are thereby liable for direct infringement.

99. Additionally, Defendants are liable for indirect infringement of the '262 patent because they induce and/or contribute to the direct infringement of the patent by their customers (including Verizon by its suppliers) and other end users who use the Verizon Base Stations to practice the claimed methods. Defendants have specifically intended and continue to specifically

intend for persons who acquire and use the Verizon Base Stations, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes the '262 patent.

100. Each Defendant has had knowledge of the '262 patent, at least as early as service of the First Amended Complaint in this action. *See, e.g., Patent Harbor, LLC v. Dreamworks Animation SKG, Inc.*, No. 6:11-cv-229, 2012 U.S. Dist. LEXIS 114199, at \*17 (E.D. Tex. Jul. 27, 2012).

101. Despite having knowledge of the '262 patent, Defendants named in this Count have specifically intended and continue to specifically intend for persons who acquire and use the Verizon Base Stations, including Defendants' customers (e.g., mobile device users, Verizon, etc.), to use such devices in a manner that infringes one or more claims of the '262 patent. This is evident when Defendants encourage and instruct customers and other end users in the use and operation of the Verizon Base Stations via advertisement and instructional materials.

102. In particular, despite having knowledge of the '262 patent, Defendants have provided, and continue to provide, instructional materials, such as user guides, owner manuals, and similar online resources (available for example, via <http://www.verizonwireless.com/support/> and other instructional materials and documentation provided or made available by Defendants to customers after purchase) that specifically teach the customers and other end users to use the Verizon Base Stations in an infringing manner. By providing such instructions, Defendants know (and have known), or should know (and should have known), that their actions have, and continue to, actively induce infringement.

103. Additionally, Defendants named in this Count know, and have known, that the Verizon Base Stations include proprietary hardware components and software instructions that

work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these hardware and software combinations, are a material part of the inventions of the '262 patent and are not staple articles of commerce suitable for substantial non-infringing use.

104. Specifically, each of the Verizon Base Stations contains at least a transceiver and a baseband processor implementing, in combination with software instructions, functionality that is specifically programmed and/or configured to generate and send a request for providing aperiodic channel information for a selected downlink component carrier, as claimed in the '262 patent. Upon information and belief, the Verizon Base Stations contain discrete code that uniquely provides this functionality. The code, which is configured to control the baseband processor, transceiver, and other components for performing these functions, is a material part of the inventions of the '262 patent and there is no substantial non-infringing use for this combination of hardware and software components.

105. On information and belief, despite having knowledge of the '262 patent since at least the filing of the First Amended Complaint in this action and knowledge that they are directly and/or indirectly infringing one or more claims of the '262 patent since at least the filing of the First Amended Complaint in this action, Defendants named in this Count have nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement; thus, Defendants' infringing activities relative to the '262 patent have been, and continue to be, willful, wanton, and deliberate in disregard of CCE's rights.

106. On information and belief, Verizon along with its suppliers, Alcatel and Ericsson, test, make, use, offer for sale, sell, and/or import the Verizon Base Stations described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution,

sale, and operation of such devices. Accordingly, Verizon, Alcatel, and Ericsson are jointly, severally, or alternatively liable for infringements described in this Count.

107. CCE has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to CCE in an amount that adequately compensates CCE for Defendants' infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

### **JOINDER OF PARTIES**

108. CCE incorporates paragraphs 1 through 107 herein by reference.

109. On information and belief, Verizon has purchased or otherwise acquired from Alcatel, Ericsson, Apple, and HTC certain mobile devices and/or base station equipment for sale, resale, distribution to their customers (and other end users), and/or use in their cellular communications networks for the benefit of their customers (and other end users), that are the subject of Counts I through VI (or some subset thereof). Thus, for these Counts, the right to relief against Alcatel, Ericsson, Apple, and HTC is asserted jointly and severally with Verizon.

110. The alleged infringements set forth in Counts I through VI arise out of the same transaction, occurrence, or series of transactions or occurrences relating to the testing, making, using, offering for sale, selling, and/or importing of the Verizon devices and equipment made the subject of Counts I through VI.

111. Questions of fact common to all Defendants will arise in this action including, for example, infringement by, or through use of, Verizon devices and equipment.

112. Thus, joinder of Verizon, Alcatel, Ericsson, Apple, and HTC is proper in this litigation pursuant to 35 U.S.C. § 299(a).

### **JURY DEMAND**

CCE hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

**PRAYER FOR RELIEF**

CCE requests that the Court find in its favor and against Defendants, and that the Court grant CCE the following relief:

- a. Judgment that one or more claims of the '022, '957, '472, '676, '590, and '262 patents have been infringed, either literally and/or under the doctrine of equivalents, by Defendants and/or by others whose infringements have been induced by Defendants and/or by others to whose infringements Defendants have contributed;
- b. Judgment that Defendants account for and pay to CCE all damages to and costs incurred by CCE because of Defendants' infringing activities and other conduct complained of herein;
- c. Judgment that Defendants account for and pay to CCE a reasonable, ongoing, post-judgment royalty because of Defendants' infringing activities and other conduct complained of herein;
- d. That Defendants' infringements relative to the '022, '957, '472, '676, '590, and '262 patents be found willful from the time that Defendants became aware of the infringing nature of their products, and that the Court award treble damages for the period of such willful infringement pursuant to 35 U.S.C. § 284;
- e. That CCE be granted pre-judgment and post-judgment interest on the damages caused by Defendants' infringing activities and other conduct complained of herein; and
- f. That CCE be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: August 15, 2016

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

I hereby certify that a true and correct copy of the foregoing document was filed electronically in compliance with Local Rule CV-5 on August 30, 2016. As of this date all counsel of record have consented to electronic service and are being served with a copy of this document through the Court's CM/ECF system under Local Rule CV-5(a)(3)(A).

/s/ Jeffrey R. Bragalone  
Jeffrey R. Bragalone