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QUALCOMM INCORPORATED

UNITED STATES DISTRICT COURT

SOUTHERN DISTRICT OF CALIFORNIA

APPLE INC.,

Plaintiff,

v.

QUALCOMM INCORPORATED,

Defendant.

No. 17-cv-0108-GPC-MDD

QUALCOMM INCORPORATED'S REDACTED ANSWER AND DEFENSES;

REDACTED COUNTERCLAIMS FOR DAMAGES, DECLARATORY JUDGMENT, AND INJUNCTIVE RELIEF

DEMAND FOR JURY TRIAL

Judge: Hon. Gonzalo P. Curiel

QUALCOMM INCORPORATED,

Counterclaim-Plaintiff,

v.

APPLE INC.,

Counterclaim-Defendant.

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ANSWER

Defendant Qualcomm Incorporated ("Qualcomm"), by its undersigned counsel, hereby answers Apple Inc.'s Complaint for Damages, Declaratory Judgment and Injunctive Relief (the "Complaint"), filed January 20, 2017, and asserts its defenses.

Except as otherwise expressly set forth below, Qualcomm denies each and every allegation contained in the Complaint, including without limitation the Table of Contents, headings, sub-headings, footnotes, diagrams, and tables contained in the Complaint.

Qualcomm specifically denies liability to Apple, or that Apple has suffered any legally cognizable damage for which Qualcomm is responsible. Qualcomm expressly reserves the right to amend and/or supplement its answer and defenses.

Subject to the foregoing, Qualcomm states as follows:

1. Qualcomm denies the allegations in Paragraph 1, except states that investigations of Qualcomm by certain regulatory agencies are ongoing.

2. Qualcomm denies the allegations in Paragraph 2, except states that (i) Qualcomm has made substantial contributions to the development of standards related to how cellular phones connect to voice and data networks; and (ii) Qualcomm is entitled to a fair royalty for its intellectual property.

3. Qualcomm denies the allegations in Paragraph 3.

4. Qualcomm denies the allegations in Paragraph 4, except states that Apple purports to describe the relief it seeks. Qualcomm refers to the Business Cooperation and Patent Agreement between Qualcomm and Apple ("Cooperation Agreement") and the Korea Fair Trade Commission ("KFTC") Decision No. 2017-0-25, dated January 20, 2017, in Case No. 2015SiGam2118 for their contents. Qualcomm filed a complaint and stay application regarding KFTC Decision No. 2017-0-25 with the Seoul High Court on February 21, 2017; the complaint proceeding is Case No. 2017Nu48, and the stay proceeding is Case

No. 2017Ah66. Qualcomm refers to its complaint and stay application for their contents. Qualcomm further states that, pursuant to the terms of the Cooperation Agreement, Qualcomm was not required to and did not make any payments to Apple under that Agreement for the second, third, and fourth quarters of 2016.

5. Qualcomm denies the allegations of the first and third sentences of Paragraph 5, except states that (i) Apple purports to describe the relief it seeks; and (ii) the iPhone was not the first cellular phone or smartphone.

6. Qualcomm denies the allegations in Paragraph 6, except states that common standards are beneficial in that they, among other things, allow cellular phones to work together, facilitate the collaborative development of new technologies, enable improvements in the overall cellular ecosystem, and promote investment in R&D.

7. Qualcomm denies the allegations in Paragraph 7, except states that (i) standardization can provide many benefits, including, among other things, promoting interoperability among wireless devices and networks and incentivizing investments in infrastructure, as well as fostering improvements in the technology; and (ii) certain standard-setting organizations request members to make certain commitments to license standard-essential patents ("SEPs") on "reasonable and non-discriminatory" ("RAND") or "fair, reasonable and non-discriminatory" ("FRAND") terms.

8. Qualcomm denies the allegations in Paragraph 8.

9. Qualcomm denies the allegations in Paragraph 9.

10. Qualcomm denies the allegations in Paragraph 10, except states that (i) Qualcomm filed certain actions against Meizu in China on June 30, 2016; and (ii) Apple purports to assert claims relating to certain patents that it contends are related to patents that Qualcomm asserted in its June 30, 2016 actions against Meizu and that Qualcomm has disclosed as potentially essential to the 3G/UMTS and/or 4G/LTE standard.

11. Qualcomm denies the allegations in Paragraph 11, except states that Apple purports to describe the relief it seeks.

12. Qualcomm denies the allegations in Paragraph 12, except states that Apple is a California corporation with its principal place of business at 1 Infinite Loop, Cupertino, California 95014, and that Apple designs and markets certain products.

13. Qualcomm denies the allegations in Paragraph 13, except states that Qualcomm is a Delaware corporation with its principal place of business at 5775 Morehouse Drive, San Diego, California 92121. Qualcomm further states that it is a global company and that its business includes, but is not limited to, the development and commercialization of wireless telecommunications technologies, products, and services.[1]

14. Qualcomm denies the allegations in Paragraph 14, except states that (i) Qualcomm has offices and employees in the Southern District of California; and (ii) Qualcomm conducts business in the Southern District of California.

15. Qualcomm denies the allegations in Paragraph 15, except states that (i) Qualcomm conducts business primarily through two reportable segments, Qualcomm CDMA Technologies ("QCT") and Qualcomm Technology Licensing ("QTL"); (ii) Qualcomm Technologies, Inc. ("QTI") is a wholly owned subsidiary of Qualcomm Incorporated; (iii) QTI operates as a separate legal entity from Qualcomm Incorporated; and (iv) QTI, together with its subsidiaries, operates substantially all of Qualcomm's product and services business, including QCT.

16. Qualcomm denies the allegations in Paragraph 16, except states that Apple purports to describe its claims and the relief it seeks.

[1] Qualcomm objects to the Complaint's definition of "Qualcomm" to the extent that it does not distinguish between Qualcomm Incorporated and the subsidiaries and/or divisions of Qualcomm. Qualcomm reserves all rights to object to Apple's purported definition for purposes of discovery or any other aspect of this action.

17. Qualcomm denies the allegations in Paragraph 17.

18. Qualcomm denies the allegations in Paragraph 18.

19. Qualcomm denies the allegations in Paragraph 19, except states that Qualcomm's principal place of business is in the Southern District of California.

20. Qualcomm denies the allegations in Paragraph 20.

21. Qualcomm denies the allegations in Paragraph 21, except states that venue is proper in this Court.

22. Qualcomm denies the allegations in Paragraph 22.

23. Qualcomm denies the allegations in Paragraph 23, except states that (i) Apple purports to assert claims related to the Cooperation Agreement; and (ii) the Cooperation Agreement contains a forum selection clause that requires any litigation initiated by Apple to be filed in San Diego County, California. Qualcomm refers to the Cooperation Agreement for its contents.

24. Qualcomm denies the allegations in Paragraph 24, except states that (i) Apple's first iPhone was released in 2007; and (ii) Apple purports to describe the certain features of the iPhone.

25. Qualcomm denies the allegations in Paragraph 25, except states that (i) Apple's iPad was released in 2010; and (ii) Apple purports to describe certain features of the iPad and its market share.

26. Qualcomm denies the allegations in Paragraph 26.

27. Qualcomm denies the allegations in Paragraph 27, except states that (i) the iPhone and certain models of the iPad can send and receive, over cellular networks, telephone calls and/or other voice and video communications, text messages, and Internet data; (ii) baseband processor chipsets are among the hardware components that, together with software and other components, enable mobile wireless devices to utilize a standardized telecommunications network; and (iii) AT&T, Verizon, Sprint, and T-Mobile are carrier companies.

28. Qualcomm denies the allegations in Paragraph 28, except states that (i) baseband processor chipsets are components contained in certain Apple iPhone and iPad devices; and (ii) iPhones and iPads contain a number of components and technologies. Qualcomm further states that Apple's contract manufacturers purchase baseband processor chipsets from Qualcomm.

29. Qualcomm denies the allegations in Paragraph 29, except states that (i) certain cellular service providers, baseband processor chipset manufacturers, and wireless device manufacturers are members of standard-setting organizations ("SSOs"); and (ii) SSOs in the wireless telecommunications industry generally create and promulgate standards that may be implemented by mobile devices and network infrastructure.

30. Qualcomm denies the allegations in Paragraph 30, except states that standards are critical to the wireless communications industry and can provide many benefits, including, among other things, promoting interoperability among wireless devices and networks and incentivizing investments in infrastructure, as well as fostering improvements in the technology.

31. Qualcomm denies the allegations in Paragraph 31.

32. Qualcomm denies the allegations in Paragraph 32, except refers to the cited materials for their contents.

33. Qualcomm denies the allegations in Paragraph 33, except refers to the cited ETSI document for its contents.

34. Qualcomm denies the allegations in Paragraph 34, except states that some disclosed patents may relate to mandatory features of a standard while others may relate only to optional features. Qualcomm refers to the opinion in *Microsoft v. Motorola, Inc.*, No. C10-1823JLR (W.D. Wash.) (the "*Microsoft* opinion"), for its contents.

35. Qualcomm denies the allegations in Paragraph 35, except states that wireless telecommunications standards are complex and that a number of entities

have disclosed patents that may be essential to such standards. Qualcomm refers to the *Microsoft* opinion for its contents.

36. Qualcomm denies the allegations in Paragraph 36.

37. Qualcomm denies the allegations in Paragraph 37.

38. Qualcomm denies the allegations in Paragraph 38.

39. Qualcomm denies the allegations in Paragraph 39, except refers to the *Microsoft* opinion for its contents.

40. Qualcomm denies the allegations in Paragraph 40.

41. Qualcomm denies the allegations in Paragraph 41, except refers to the opinion in *Broadcom Corp. v. Qualcomm Inc.*, No. 06-4292 (3d Cir.), for its contents.

42. Qualcomm denies the allegations in Paragraph 42.

43. Qualcomm denies the allegations in Paragraph 43, except states that (i) ETSI is an SSO; (ii) Qualcomm is a member of ETSI; (iii) ETSI produces globally accepted standards for the telecommunications industry; and (iv) ETSI created or helped create numerous telecommunication standards, including the 2G/GSM, 3G/UMTS, and 4G/LTE cellular communication standards. Qualcomm further states that ETSI is based in Sophia Antipolis, France and has more than 800 members, including Apple, from countries across five continents.

44. Qualcomm denies the allegations in Paragraph 44, except refers to ETSI's Intellectual Property Rights ("IPR") Policy for its contents.

45. Qualcomm denies the allegations in Paragraph 45, except refers to ETSI's IPR Policy for its contents.

46. Qualcomm denies the allegations in Paragraph 46, except refers to ETSI's "Dynamic Reporting" portal and database for their contents.

47. Qualcomm denies the allegations in Paragraph 47, except refers to its IPR undertakings submitted to ETSI for their contents.

48. Qualcomm denies the allegations in Paragraph 48.

49. Qualcomm denies the allegations in Paragraph 49, except refers to its contract with ETSI for its contents.

50. Qualcomm denies the allegations in Paragraph 50.

51. Qualcomm denies the allegations in Paragraph 51.

52. Qualcomm denies the allegations in Paragraph 52, except states that cellular technology has evolved over time, beginning with so-called "1G", which used analog technology and allowed only voice transmission.

53. Qualcomm denies the allegations in Paragraph 53, except states that (i) so-called "2G" cellular technology includes GSM and CDMA standards; and (ii) 2G digital technology offers improved capacity and functioning compared to 1G analog technology. Qualcomm further states that most cellular telephones in the United States today use at least 2G technology.

54. Qualcomm denies the allegations in Paragraph 54, except states that (i) so-called "3G" cellular technology includes the UMTS and CDMA2000 standard; (ii) UMTS incorporates WCDMA technology; and (iii) certain products employ both 2G and 3G technologies.

55. Qualcomm denies the allegations in Paragraph 55, except states that LTE, which is sometimes referred to as a "4G" cellular standard, includes a number of releases that have provided a number of improved features.

56. Qualcomm denies the allegations in Paragraph 56, except states that certain "multimode" chipsets support both 3G and 4G standards.

57. Qualcomm denies the allegations in Paragraph 57, except states that each baseband processor chipset supports certain cellular communication standards.

58. Qualcomm denies the allegations in Paragraph 58, except states that certain carrier networks employ certain cellular standards. Qualcomm further states that in the United States, AT&T and T-Mobile use 2G GSM and 3G UMTS/WCDMA, and Verizon and Sprint use 2G CDMA One and 3G CDMA2000, and that all of those carriers use 4G LTE.

59. Qualcomm denies the allegations in Paragraph 59, except states that (i) wireless handsets may be configured to a particular carrier's specifications; and (ii) different regions and countries may use different cellular standards.

60. Qualcomm denies the allegations in Paragraph 60.

61. Qualcomm denies the allegations in Paragraph 61.

62. Qualcomm denies the allegations in Paragraph 62.

63. Qualcomm denies the allegations in Paragraph 63, except refers to its 2016 Annual Report on Form 10-K, dated November 2, 2016, for its contents.

64. Qualcomm denies the allegations in Paragraph 64.

65. Qualcomm denies the allegations in Paragraph 65, except states that the development of commercially viable cellular chipsets requires investments of time, effort, and money.

66. Qualcomm denies the allegations in Paragraph 66, except states that Qualcomm owns patents relating to implementations of certain cellular standards and has made disclosures of patents pursuant to the policies of certain SSOs.

67. Qualcomm denies the allegations in Paragraph 67, except states that becoming a successful supplier of cellular chipsets requires investments of time, effort, and money to provide reliable products.

68. Qualcomm denies the allegations in Paragraph 68.

69. Qualcomm denies the allegations in Paragraph 69, except states that multiple vendors offered baseband chipsets during the year 2006, including Infineon, Broadcom, Ericsson, Renesas, and Texas Instruments.

70. Qualcomm denies the allegations in Paragraph 70.

71. Qualcomm denies the allegations in Paragraph 71.

72. Qualcomm denies the allegations in Paragraph 72, except states that since 2007, Apple has been reimbursing its contract manufacturers for royalties

they paid to Qualcomm under license agreements the contract manufacturers signed with Qualcomm.

73. Qualcomm denies the allegations in Paragraph 73, except states that (i) Apple released the first iPhone using Intel (then Infineon) baseband processor chipsets in 2007; (ii) Qualcomm has license agreements with certain contract manufacturers that make products for Apple and pay royalties directly to Qualcomm; and (iii) the contract manufacturers pass certain costs and expenses to Apple.

74. Qualcomm denies the allegations in Paragraph 74, except states that (i) Qualcomm has license agreements with certain contract manufacturers that make products for Apple and pay royalties directly to Qualcomm; and (ii) those license agreements contain confidentiality provisions.

75. Qualcomm denies the allegations in Paragraph 75.

76. Qualcomm denies the allegations in Paragraph 76, except states that (i) Qualcomm and Apple have engaged in licensing negotiations; and (ii) the parties have exchanged written correspondence regarding licensing and refers to that correspondence for its contents.

77. Qualcomm denies the allegations in Paragraph 77.

78. Qualcomm denies the allegations in Paragraph 78, except states that Qualcomm and Apple have engaged in licensing negotiations.

79. Qualcomm denies the allegations in Paragraph 79, except states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding Apple's royalty payments to other patent holders, and therefore Qualcomm denies the allegations regarding Apple's royalty payments to other patent holders.

80. Qualcomm states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 80, and therefore Qualcomm denies the allegations in Paragraph 80. Qualcomm further states that

Apple has not provided Qualcomm an unredacted version of the allegations in Paragraph 80.

81. Qualcomm states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 81 and footnote 1, and therefore Qualcomm denies the allegations in Paragraph 81 and footnote 1. Qualcomm further states that Apple has not provided Qualcomm an unredacted version of the allegations in Paragraph 81 and footnote 1.

82. Qualcomm denies the allegations in Paragraph 82, except refers to the U.S. Fair Trade Commission's ("FTC") complaint in Case No. 5:17-cv-00220 (N.D. Cal.) (the "FTC Complaint") for its contents.

83. Qualcomm denies the allegations in Paragraph 83, except states that the retail price for certain baseband processor chipsets can be approximately $10 to $20, or more.

84. Qualcomm denies the allegations in Paragraph 84, except states that (i) Apple's contract manufacturers buy certain components from Qualcomm; and (ii) separately, the contract manufacturers pay agreed-upon patent royalties to Qualcomm.

85. Qualcomm states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations in Paragraph 85, and therefore Qualcomm denies the allegations in Paragraph 85.

86. Qualcomm denies the allegations in Paragraph 86.

87. Qualcomm denies the allegations in Paragraph 87, except refers to the U.S. Supreme Court's opinion in *Quanta Computer, Inc. v. LG Elecs., Inc.*, No. 06-937, for its contents.

88. Qualcomm denies the allegations in Paragraph 88, except refers to the FTC Complaint for its contents.

89. Qualcomm denies the allegations in Paragraph 89, except states that (i) QTI is a wholly owned subsidiary of Qualcomm Incorporated; and (ii) QTI operates QCT.

90. Qualcomm denies the allegations in Paragraph 90, except refers to the press release, entitled "Qualcomm Implements New Corporate Structure", dated October 1, 2012, for its contents.

91. Qualcomm denies the allegations in Paragraph 91, except states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding Apple's purported intentions, and therefore Qualcomm denies the allegations regarding Apple's purported intentions.

92. Qualcomm denies the allegations in Paragraph 92.

93. Qualcomm denies the allegations in Paragraph 93.

94. Qualcomm denies the allegations in Paragraph 94.

95. Qualcomm denies the allegations in Paragraph 95.

96. Qualcomm denies the allegations in Paragraph 96.

97. Qualcomm denies the allegations in Paragraph 97.

98. Qualcomm denies the allegations in Paragraph 98, except states that Qualcomm and Apple have entered certain agreements, and refers to those agreements for their contents.

99. Qualcomm denies the allegations in Paragraph 99, except refers to the Cooperation Agreement for its contents.

100. Qualcomm denies the allegations in Paragraph 100, except refers to the Cooperation Agreement for its contents. Qualcomm further states that Apple has not provided Qualcomm an unredacted version of the allegations in Paragraph 100.

101. Qualcomm denies the allegations in Paragraph 101, except refers to the Cooperation Agreement for its contents.

102. Qualcomm denies the allegations in Paragraph 102, except refers to the Cooperation Agreement for its contents.

103. Qualcomm denies the allegations in Paragraph 103, except refers to the Cooperation Agreement for its contents.

104. Qualcomm denies the allegations in Paragraph 104.

105. Qualcomm denies the allegations in Paragraph 105, except refers to the Cooperation Agreement for its contents.

106. Qualcomm denies the allegations in Paragraph 106, except refers to the Cooperation Agreement for its contents.

107. Qualcomm denies the allegations in Paragraph 107, except refers to its letter to Apple regarding the Cooperation Agreement, dated October 9, 2016, for its contents.

108. Qualcomm denies the allegations in Paragraph 108, except states that Qualcomm and Apple have entered certain agreements, and refers to those agreements for their contents.

109. Qualcomm denies the allegations in Paragraph 109, except refers to the Marketing Incentive Agreement, dated January 8, 2007 (the "MIA"), for its contents.

110. Qualcomm denies the allegations in Paragraph 110, except refers to the Strategic Terms Agreement, dated December 16, 2009 (the "STA"), and the Amended and Restated Strategic Terms Agreement, dated February 28, 2013 (the "ASTA") for their contents.

111. Qualcomm denies the allegations in Paragraph 111, except refers to the Transition Agreement, dated February 11, 2011 (the "TA"), for its contents.

112. Qualcomm denies the allegations in Paragraph 112, except refers to the First Amendment to the Transition Agreement, dated January 1, 2013 (the "FATA"), for its contents.

113. Qualcomm denies the allegations in Paragraph 113, except refers to the MIA, the STA, the ASTA, the TA, and the FATA for their contents.

114. Qualcomm denies the allegations in Paragraph 114, except states that Qualcomm and Apple have engaged in certain negotiations over a period of time.

115. Qualcomm denies the allegations in Paragraph 115, except states that (i) in 2015, Qualcomm offered to license to Apple a portfolio of Qualcomm's Chinese 3G and 4G standard-essential patents on terms consistent with Qualcomm's FRAND commitments to ETSI and with the decision and order of China's NDRC; and (ii) Apple rejected that offer.

116. Qualcomm denies the allegations in Paragraph 116, except states that (i) Qualcomm and Apple exchanged correspondence regarding patent licensing on multiple occasions on and after February 5, 2016, and refers to that correspondence for its contents; and (ii) Qualcomm provided Apple with nearly 2,000 pages of detailed information regarding its portfolio of patents disclosed to ETSI as potentially essential to 3G and 4G standards, including Qualcomm's list of U.S. patents disclosed to ETSI as potentially essential to 3G and 4G standards. Qualcomm refers to its website for its contents.

117. Qualcomm denies the allegations in Paragraph 117, except states that (i) on June 15, 2016, Qualcomm offered Apple a license to Qualcomm's Chinese 3G and 4G SEPs on FRAND terms and conditions and sent Apple a draft Complete Terminal Chinese Patent License Agreement, and refers to that correspondence and draft agreement for their contents; and (ii) on July 15, 2016, Qualcomm offered Apple a license to Qualcomm's "rest of world" 3G and 4G SEPs on FRAND terms and conditions and sent Apple a draft Complete Terminal Patent License Agreement, and refers to that correspondence and draft agreement for their contents.

118. Qualcomm denies the allegations in Paragraph 118, except states that in a letter dated September 13, 2016, Apple made a non-FRAND offer to Qualcomm, and Qualcomm refers to that correspondence for its contents.

119. Qualcomm denies the allegations in Paragraph 119 and footnote 2, except states that (i) Qualcomm and Apple have engaged in licensing negotiations; and (ii) the parties have exchanged written correspondence regarding licensing, and Qualcomm refers to that correspondence for its contents. Representatives of Qualcomm and Apple met in-person on December 16, 2016, and December 21, 2016. During those meetings, Qualcomm presented claim charts for certain of its patents, and answered Apple's questions regarding those claim charts. Qualcomm offered to present hundreds of additional claim charts. Rather than engage in further negotiation and discussion, Apple chose to engage in litigation.

120. Qualcomm denies the allegations in Paragraph 120 and footnote 3, except states that Meizu was a smartphone maker in the Chinese market in 2015, and Qualcomm filed certain actions against Meizu in June 2016. Qualcomm refers to those actions and the Reuters article entitled "Qualcomm Files 17 New Complaints in China Courts Against Smartphone Maker Meizu", dated June 30, 2016, for their contents.

121. Qualcomm denies the allegations in Paragraph 121 and footnote 4, except refers to its complaints against Meizu, the press release entitled "Qualcomm Files Complaint Against Meizu in China", dated June 24, 2016, and the press release entitled "Qualcomm Files Patent Infringement Complaints Against Meizu in China", dated June 30, 2016, for their contents.

122. Qualcomm denies the allegations in Paragraph 122, except states that Qualcomm disclosed to ETSI that each of the Patents-in-Suit may be or may become essential to a 3G/UMTS and/or 4G/LTE standard.

123. Qualcomm denies the allegations in Paragraph 123, except states that Qualcomm owns U.S. Patent No. 7,246,242 ("the '242 patent"), entitled "Integrity Protection Method for Radio Network Signaling", and refers to the '242 patent for its contents and relation to other patents.

124. Qualcomm denies the allegations in Paragraph 124, except states that Qualcomm owns U.S. Patent No. 6,556,549 ("the '549 patent"), entitled "Method and Apparatus for Signal Combining in a High Data Rate Communication System", and refers to the '549 patent for its contents and relation to other patents.

125. Qualcomm denies the allegations in Paragraph 125, except states that Qualcomm owns U.S. Patent No. 9,137,822 ("the '822 patent"), entitled "Efficient Signaling over Access Channel", and refers to the '822 patent for its contents and relation to other patents.

126. Qualcomm denies the allegations in Paragraph 126, except states that Qualcomm owns U.S. Patent No. 7,289,630 ("the '630 patent"), entitled "Counter Initialization, Particularly for Radio Frames", and refers to the '630 patent for its contents and relation to other patents.

127. Qualcomm denies the allegations in Paragraph 127, except states that Qualcomm owns U.S. Patent No. 8,867,494 ("the '494 patent"), entitled "System and Method for Single Frequency Dual Cell High Speed Downlink Packet Access", and refers to the '494 patent for its contents.

128. Qualcomm denies the allegations in Paragraph 128, except states that Qualcomm owns U.S. Patent No. 7,095,725 ("the '725 patent"), entitled "Method and Apparatus for Data Transmission on a Reverse Link in a Communication System", and refers to the '725 patent for its contents.

129. Qualcomm denies the allegations in Paragraph 129, except states that Qualcomm owns U.S. Patent No. 6,694,469 ("the '469 patent"), entitled "Method and Apparatus for a Quick Retransmission of Signals in a Communication System", and refers to the '469 patent for its contents.

130. Qualcomm denies the allegations in Paragraph 130, except states that Qualcomm owns U.S. Patent No. 9,059,819 ("the '819 patent"), entitled "Flexible Uplink Control Channel Configuration", and refers to the '819 patent for its contents.

131. Qualcomm denies the allegations in Paragraph 131, except states that Qualcomm owns U.S. Patent No. 7,096,021 ("the '021 patent"), entitled "Method for Initiating in a Terminal of a Cellular Network the Measurement of Power Levels of Signals and a Terminal", and refers to the '021 patent for its contents.

132. Qualcomm denies the allegations in Paragraph 132.

133. Qualcomm denies the allegations in Paragraph 133.

134. Qualcomm denies the allegations in Paragraph 134.

135. Qualcomm denies the allegations in Paragraph 135, except states that it owns a very large number of patents around the world that have been disclosed to ETSI as potentially essential to one or more cellular standards and refers to ETSI's "Dynamic Reporting" portal and database for their contents.

136. Qualcomm denies the allegations in Paragraph 136.

137. Qualcomm denies the allegations in Paragraph 137, except refers to the *Microsoft* opinion for its contents.

138. Qualcomm denies the allegations in Paragraph 138, except refers to the *Microsoft* opinion for its contents.

139. Qualcomm denies the allegations in Paragraph 139, except refers to the opinion in *LaserDynamics, Inc. v. Quanta Computer, Inc.*, Nos. 2011-1440, 2011-1470 (Fed. Cir.), for its contents.

140. Qualcomm denies the allegations in Paragraph 140.

141. Qualcomm denies the allegations in Paragraph 141.

142. Qualcomm denies the allegations in Paragraph 142.

143. Qualcomm denies the allegations in Paragraph 143.

144. Qualcomm denies the allegations in Paragraph 144, except refers to the opinion in *In re Innovatio IP Ventures, LLC Patent Litig.*, No. 11 C 9308 (N.D. Ill.), for its contents.

145. Qualcomm denies the allegations in Paragraph 145, except states that (i) Apple currently sells the 16GB iPhone SE for $399; and (ii) Apple currently

sells the 256 GB iPhone 7 Plus for $969. Qualcomm further states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding products sold by Walmart, and therefore Qualcomm denies the allegations regarding products sold by Walmart. Qualcomm refers to the cited Walmart web page for its contents.

146. Qualcomm denies the allegations in Paragraph 146, except states that Apple sells multiple versions of each generation of iPhones and iPads at different prices.

147. Qualcomm denies the allegations in Paragraph 147, except refers to the cited opinions for their contents.

148. Qualcomm denies the allegations in Paragraph 148, except refers to the opinion in *GPNE Corp. v. Apple, Inc.*, No. 12-CV-02885-LHK (N.D. Cal.), for its contents.

149. Qualcomm denies the allegations in Paragraph 149, except refers to the cited opinions for their contents.

150. Qualcomm denies the allegations in Paragraph 150.

151. Qualcomm denies the allegations in Paragraph 151, except refers to the *Microsoft* opinion and ETSI's "Dynamic Reporting" portal and database for their contents.

152. Qualcomm denies the allegations in Paragraph 152.

153. Qualcomm denies the allegations in Paragraph 153, except refers to the opinion in *Apple, Inc. v. Motorola Mobility, Inc.*, No. 11-cv-178-bbc (W.D. Wis.), for its contents.

154. Qualcomm denies the allegations in Paragraph 154, except states that it has entered into non-exhaustive patent agreements, including non-exhaustive license agreements, with modem chipmakers and has never excluded a competing cellular modem chip maker from supplying cellular modem chips. Qualcomm

refers to the final transcript of its Q4 and Fiscal 2005 Earnings Conference Call of November 2, 2005, for its contents.

155. Qualcomm denies the allegations in Paragraph 155, except states that (i) Qualcomm presented at the Jefferies Technology Conference on October 2, 2007, and refers to the transcript of that presentation for its contents; and (ii) on December 10, 2007, Qualcomm filed a Brief of Qualcomm Inc. as Amicus Curiae Supporting Respondent in *Quanta Computer, Inc. v. LG Elecs., Inc.*, No. 06-937, and refers to that brief for its contents.

156. Qualcomm denies the allegations in Paragraph 156, except refers to its 2016 Annual Report on Form 10-K, dated November 2, 2016, its 2007 Annual Report on Form 10-K, dated November 8, 2007, and its 2008 Annual Report on Form 10-K, dated November 6, 2008, for their contents.

157. Qualcomm denies the allegations in Paragraph 157, except refers to its 2014 Annual Report on Form 10-K, dated November 5, 2014, and the KFTC's Decision No. 2017-0-25, dated January 20, 2017, in Case No. 2015SiGam2118, for their contents.

158. Qualcomm denies the allegations in Paragraph 158.

159. Qualcomm denies the allegations in Paragraph 159.

160. Qualcomm denies the allegations in Paragraph 160, except refers to the Cooperation Agreement for its contents.

161. Qualcomm denies the allegations in Paragraph 161, except refers to the FTC Complaint for its contents.

162. Qualcomm denies the allegations in Paragraph 162, except states that Qualcomm has been subject to investigations by competition authorities in China, South Korea, Taiwan, Japan, Europe, and the United States.

163. Qualcomm denies the allegations in Paragraph 163, except states that (i) the Japan Fair Trade Commission ("JFTC") issued an order on September 30, 2009; (ii) the Tokyo High Court issued a decision to stay the JFTC's

September 30, 2009 order, dated February 11, 2010; (iii) China's NDRC issued an Administrative Sanction Decision in connection with its investigation of Qualcomm on February 9, 2015; (iv) Qualcomm implemented a Rectification Plan, dated February 9, 2015, in connection with the NDRC's Administrative Sanction Decision; (v) the NDRC published a press release on February 10, 2015, stating that Qualcomm's Rectification Plan satisfied its Administrative Sanction Decision; (vi) the European Commission ("EC") issued a Statement of Objections in Case AT.39711, dated December 8, 2015; (vii) the EC issued a Statement of Objections in Case AT.40220, dated December 8, 2015; (viii) the KFTC issued Decision No. 2017-0-25, dated January 20, 2017, in Case No. 2015SiGam2118; and (ix) Qualcomm filed a complaint and stay application regarding KFTC Decision No. 2017-0-25 with the Seoul High Court on February 21, 2017, the complaint proceeding is Case No. 2017Nu48, and the stay proceeding is Case No. 2017Ah66, and refers to the foregoing documents for their contents.

164. Qualcomm denies the allegations in Paragraph 164, except states that (i) the FTC notified Qualcomm of an investigation in September 2014; (ii) the FTC filed the FTC Complaint on January 17, 2017; and (iii) the FTC issued a press release titled "FTC Charges Qualcomm With Monopolizing Key Semiconductor Device Used in Cell Phones", on January 17, 2017. Qualcomm refers to the FTC Complaint and the cited press release for their contents.

165. Qualcomm denies the allegations in Paragraph 165, except states that (i) China's NDRC issued an Administrative Sanction Decision in connection with its investigation of Qualcomm on February 9, 2015; (ii) Qualcomm implemented a Rectification Plan, dated February 9, 2015, in connection with the NDRC's Administrative Sanction Decision; and (iii) the NDRC published a press release on February 10, 2015, stating that Qualcomm's Rectification Plan satisfied its Administrative Sanction Decision. Qualcomm refers to the foregoing documents for their contents.

166. Qualcomm denies the allegations in Paragraph 166, except states that (i) China's NDRC issued an Administrative Sanction Decision in connection with its investigation of Qualcomm on February 9, 2015; (ii) Qualcomm implemented a Rectification Plan, dated February 9, 2015, in connection with the NDRC's Administrative Sanction Decision; (iii) the NDRC published a press release on February 10, 2015, stating that Qualcomm's Rectification Plan satisfied its Administrative Sanction Decision; and (iv) since February 9, 2015, Qualcomm has entered into more than 100 license agreements with Chinese companies on terms consistent with the Rectification Plan. Qualcomm refers to the foregoing documents for their contents.

167. Qualcomm denies the allegations in Paragraph 167, except states that (i) in 2006, the JFTC notified Qualcomm of a possible investigation; (ii) the JFTC issued an order, dated September 30, 2009; and (iii) the Tokyo High Court issued a decision to stay the JFTC's September 30, 2009 order on February 11, 2010. Qualcomm refers to the foregoing documents for their contents.

168. Qualcomm denies the allegations in Paragraph 168, except states that (i) the KFTC issued Decision No. 2009-281, dated December 30, 2009, in Case No. 2009Jisik0329; (ii) the Seoul High Court issued a judgment, dated June 19, 2013, in Case No. 2010Nu3932, which modified KFTC Decision No. 2009-281; (iii) the KFTC's Decision No. 2009-281 and the Seoul High Court's June 19, 2013 judgment are at issue in Case No. 2013Du14726 pending before the Supreme Court of Korea; (iv) the KFTC issued Decision No. 2017-0-25 in Case No. 2015SiGam2118, dated January 20, 2017; (v) the KFTC issued a press release, dated December 28, 2016; and (vi) Qualcomm filed a complaint and stay application regarding KFTC Decision No. 2017-0-25 with the Seoul High Court on February 21, 2017, the complaint proceeding is Case No. 2017Nu48, and the stay proceeding is Case No. 2017Ah66. Qualcomm refers to the foregoing documents for their contents.

169. Qualcomm denies the allegations in Paragraph 169, except states that (i) the EC notified Qualcomm of an investigation in October 2014; (ii) the EC issued a Statement of Objections in Case AT.39711 on December 8, 2015; (iii) the EC issued a Statement of Objections in Case AT.40220 on December 8, 2015; and (iv) the EC issued a press release on December 8, 2015. Qualcomm refers to the foregoing documents for their contents.

170. Qualcomm denies the allegations in Paragraph 170, except states that investigations of Qualcomm by the JFTC and the Taiwan Fair Trade Commission ("TFTC") were ongoing as of the date of Apple's Complaint.

171. Qualcomm denies the allegations in Paragraph 171, except states that regulatory agencies investigating Qualcomm have sought information from third-parties, including Apple.

172. Qualcomm denies the allegations in Paragraph 172 and footnote 5, except states that (i) Apple produced documents to the FTC; (ii) a representative of Apple gave a presentation in an open session before the KFTC in Case No. 2015SiGam2118 on August 17, 2016; and (iii) Apple has provided certain information to the EC and TFTC in connection with investigations of Qualcomm. Qualcomm states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding depositions of Apple executives.

173. Qualcomm denies the allegations in Paragraph 173, except states that (i) Qualcomm has made submissions to the KFTC in connection with Case No. 2015SiGam2118; and (ii) Qualcomm representatives, including its President, were present when Apple testified in an open session before the KFTC in Case No. 2015SiGam2118 on August 17, 2016.

174. Qualcomm denies the allegations in Paragraph 174.

175. Qualcomm denies the allegations in Paragraph 175.

176. Qualcomm denies the allegations in Paragraph 176, except states that from 2013 through mid-2016, Qualcomm made payments to Apple under various agreements, including the Cooperation Agreement.

177. Qualcomm denies the allegations in Paragraph 177, except states that pursuant to the terms of the Cooperation Agreement, Qualcomm was not required to and did not make certain payments to Apple.

178. Qualcomm denies the allegations in Paragraph 178, except states that pursuant to the terms of the Cooperation Agreement, Qualcomm was not required to and did not make certain payments to Apple. Apple submitted certain documentation to Qualcomm in connection with the Cooperation Agreement for each quarter of 2016, and Qualcomm refers to that documentation for its contents.

179. Qualcomm denies the allegations in Paragraph 179, except states that Qualcomm and Apple executives met around mid-September 2016.

180. Qualcomm denies the allegations in Paragraph 180, except states that Apple made a presentation to the KFTC in Case No. 2015SiGam2118 on August 17, 2016, titled "Apple's Response to KFTC: Views on Qualcomm's Abuse of Dominance", and refers to that presentation for its contents.

181. Qualcomm denies the allegations in Paragraph 181, except states that Qualcomm and Apple corresponded regarding the Cooperation Agreement after the second quarter of 2016, and refers to such correspondence for its contents. Qualcomm states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding Apple's intentions, and therefore Qualcomm denies the allegations regarding Apple's intentions.

182. Qualcomm denies the allegations in Paragraph 182, except states that Qualcomm and Apple corresponded regarding the Cooperation Agreement after the second quarter of 2016, and refers to such correspondence for its contents.

183. Qualcomm denies the allegations in Paragraph 183, except states that Qualcomm and Apple corresponded regarding the Cooperation Agreement after the second quarter of 2016, and refers to such correspondence for its contents.

184. Qualcomm denies the allegations in Paragraph 184, except states that Qualcomm and Apple corresponded regarding the Cooperation Agreement after the second quarter of 2016, and refers to such correspondence for its contents.

185. Qualcomm denies the allegations in Paragraph 185, except states that Qualcomm and Apple corresponded regarding the Cooperation Agreement after the second quarter of 2016, and refers to such correspondence for its contents.

186. Qualcomm denies the allegations in Paragraph 186, except states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding each of Apple's interactions with government agencies, and therefore Qualcomm denies the allegations regarding each of Apple's interactions with government agencies.

187. Qualcomm denies the allegations in Paragraph 187, except states that Qualcomm and Apple entered into the Cooperation Agreement, and refers to that Agreement for its contents.

188. Qualcomm denies the allegations in Paragraph 188, except states that Qualcomm and Apple entered into the Cooperation Agreement, and refers to that Agreement for its contents.

189. Qualcomm denies the allegations in Paragraph 189, except states that Qualcomm and Apple corresponded regarding the Cooperation Agreement after the second quarter of 2016, and refers to such correspondence for its contents.

190. Qualcomm denies the allegations in Paragraph 190, except states that Qualcomm and Apple corresponded regarding the Cooperation Agreement after the second quarter of 2016, and refers to such correspondence for its contents.

191. Qualcomm denies the allegations in Paragraph 191, except states that Qualcomm and Apple corresponded regarding the Cooperation Agreement after the second quarter of 2016, and refers to such correspondence for its contents.

192. Qualcomm denies the allegations in Paragraph 192, except states that Qualcomm and Apple corresponded regarding the Cooperation Agreement after the second quarter of 2016, and refers to such correspondence for its contents.

193. Qualcomm denies the allegations in Paragraph 193 and footnote 6, except states that Qualcomm sent Apple a letter regarding the Cooperation Agreement on December 2, 2016, and refers to that letter for its contents. Qualcomm further states that it filed *ex parte* applications pursuant to 28 U.S.C. § 1782 in the Northern District of California, and refers to those applications for their contents. Qualcomm refers to the opinion in *In re Ex Parte Application of Qualcomm Inc.*, Nos. 5:16-mc-80002-PSG to -80008-PSG (N.D. Cal.), for its contents.

194. Qualcomm denies the allegations in Paragraph 194.

195. Qualcomm denies the allegations in Paragraph 195.

196. Qualcomm denies the allegations in Paragraph 196, except refers to the cited materials for their contents.

197. Qualcomm denies the allegations in Paragraph 197, except states that (i) the FTC, the EC, and the TFTC are members of the International Competition Network ("ICN"); and (ii) the ICN has published Guidance on Investigative Process, and refers to that publication for its contents.

198. Qualcomm denies the allegations in Paragraph 198, except refers to the cited opinions for their contents.

199. Qualcomm denies the allegations in Paragraph 199, except refers to the opinion in *In re Ex Parte Application of Qualcomm Inc.*, Nos. 5:16-mc-80002-PSG to -80008-PSG (N.D. Cal.), for its contents.

200. Qualcomm denies the allegations in Paragraph 200, except refers to the Korean Monopoly Regulation and Fair Trade Act for its contents.

201. Qualcomm denies the allegations in Paragraph 201, except refers to the cited opinions for their contents.

202. Qualcomm denies the allegations in Paragraph 202.

203. Qualcomm denies the allegations in Paragraph 203, except states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding Apple's expectations and estimates, and therefore Qualcomm denies the allegations regarding Apple's expectations and estimates.

204. Qualcomm denies the allegations in Paragraph 204.

205. Qualcomm denies the allegations in Paragraph 205.

206. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

207. Qualcomm denies the allegations in Paragraph 207, except states that Qualcomm and Apple have entered certain agreements, including the Cooperation Agreement.

208. Qualcomm denies the allegations in Paragraph 208, except states that Qualcomm and Apple entered into the Cooperation Agreement, and refers to that Agreement for its contents.

209. Qualcomm denies the allegations in Paragraph 209.

210. Qualcomm denies the allegations in Paragraph 210.

211. Qualcomm denies the allegations in Paragraph 211.

212. Qualcomm denies the allegations in Paragraph 212.

213. Qualcomm denies the allegations in Paragraph 213, except states that pursuant to the terms of the Cooperation Agreement, Qualcomm was not required to and did not make any payment to Apple under that Agreement for the fourth quarter of 2016.

214. Qualcomm denies the allegations in Paragraph 214.

215. Qualcomm denies the allegations in Paragraph 215.

216. Qualcomm denies the allegations in Paragraph 216.

217. Qualcomm denies the allegations in Paragraph 217.

218. Qualcomm denies the allegations in Paragraph 218, except states that Apple and Qualcomm engaged in certain communications regarding the Cooperation Agreement during two 30-day periods and did not resolve their dispute regarding the Cooperation Agreement.

219. Qualcomm denies the allegations in Paragraph 219.

220. Qualcomm denies the allegations in Paragraph 220, except states that [redacted]

221. Qualcomm denies the allegations in Paragraph 221, except states that the FTC filed the FTC Complaint on January 17, 2017, and refers to that complaint for its contents. Qualcomm states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding Apple's intentions, and therefore Qualcomm denies the allegations regarding Apple's intentions.

222. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

223. Qualcomm denies the allegations in Paragraph 223, except states that Apple and Qualcomm each had an obligation to act fairly and in good faith with respect to their obligations under the Cooperation Agreement.

224. Qualcomm denies the allegations in Paragraph 224.

225. Qualcomm denies the allegations in Paragraph 225.

226. Qualcomm denies the allegations in Paragraph 226.

227. Qualcomm denies the allegations in Paragraph 227.

228. Qualcomm denies the allegations in Paragraph 228.

229. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

230. Qualcomm denies the allegations in Paragraph 230, except refers to California Civil Code § 1671(b) for its contents.

231. Qualcomm denies the allegations in Paragraph 231.

232. Qualcomm denies the allegations in Paragraph 232.

233. Qualcomm denies the allegations in Paragraph 233.

234. Qualcomm denies the allegations in Paragraph 234.

235. Qualcomm denies the allegations in Paragraph 235.

236. Qualcomm denies the allegations in Paragraph 236.

237. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

238. Qualcomm denies the allegations in Paragraph 238, except refers to California Code of Civil Procedure § 1060 for its contents.

239. Qualcomm denies the allegations in Paragraph 239 and denies that the declaratory relief sought by Apple is appropriate, except states that certain rights and obligations under the Cooperation Agreement are at issue.

240. Qualcomm denies the allegations in Paragraph 240.

241. Qualcomm denies the allegations in Paragraph 241, except states that Apple purports to seek declaratory relief in its Complaint.

242. Qualcomm denies the allegations in Paragraph 242 and denies that the declaratory relief sought by Apple is appropriate, except states that certain rights and obligations under the Cooperation Agreement are at issue.

243. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

244. Qualcomm denies the allegations in Paragraph 244, except refers to the '242 patent for its contents.

245. Qualcomm states that the allegations in Paragraph 245 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 245.

246. Qualcomm states that the allegations in Paragraph 246 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 246.

247. Qualcomm states that the allegations in Paragraph 247 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 247.

248. Qualcomm states that the allegations in Paragraph 248 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 248, except states that Apple purports to seek declaratory relief in its Complaint.

249. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

250. Qualcomm denies the allegations in Paragraph 250.

251. Qualcomm denies the allegations in Paragraph 251.

252. Qualcomm denies the allegations in Paragraph 252, except refers to the cited opinions for their contents.

253. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

254. Qualcomm denies the allegations in Paragraph 254, except refers to the '549 patent for its contents.

255. Qualcomm states that the allegations in Paragraph 255 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 255.

256. Qualcomm states that the allegations in Paragraph 256 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 256.

257. Qualcomm states that the allegations in Paragraph 257 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 257.

258. Qualcomm states that the allegations in Paragraph 258 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 258, except states that Apple purports to seek declaratory relief in its Complaint.

259. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

260. Qualcomm denies the allegations in Paragraph 260.

261. Qualcomm denies the allegations in Paragraph 261.

262. Qualcomm denies the allegations in Paragraph 262, except refers to the cited opinions for their contents.

263. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

264. Qualcomm denies the allegations in Paragraph 264, except refers to the '822 patent for its contents.

265. Qualcomm states that the allegations in Paragraph 265 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 265.

266. Qualcomm states that the allegations in Paragraph 266 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 266.

267. Qualcomm states that the allegations in Paragraph 267 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 267.

268. Qualcomm states that the allegations in Paragraph 268 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 268, except states that Apple purports to seek declaratory relief in its Complaint.

269. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

270. Qualcomm denies the allegations in Paragraph 270.

271. Qualcomm denies the allegations in Paragraph 271.

272. Qualcomm denies the allegations in Paragraph 272, except refers to the cited opinions for their contents.

273. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

274. Qualcomm denies the allegations in Paragraph 274, except refers to the '630 patent for its contents.

275. Qualcomm states that the allegations in Paragraph 275 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 275.

276. Qualcomm states that the allegations in Paragraph 276 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 276.

277. Qualcomm states that the allegations in Paragraph 277 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 277.

278. Qualcomm states that the allegations in Paragraph 278 state a legal conclusion to which no response is required. To the extent a response is required,

Qualcomm denies the allegations in Paragraph 278, except states that Apple purports to seek declaratory relief in its Complaint.

279. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

280. Qualcomm denies the allegations in Paragraph 280.

281. Qualcomm denies the allegations in Paragraph 281.

282. Qualcomm denies the allegations in Paragraph 282, except refers to the cited opinions for their contents.

283. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

284. Qualcomm denies the allegations in Paragraph 284, except refers to the '494 patent for its contents.

285. Qualcomm states that the allegations in Paragraph 285 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 285.

286. Qualcomm states that the allegations in Paragraph 286 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 286.

287. Qualcomm states that the allegations in Paragraph 287 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 287.

288. Qualcomm states that the allegations in Paragraph 288 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 288, except states that Apple purports to seek declaratory relief in its Complaint.

289. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

290. Qualcomm denies the allegations in Paragraph 290.

291. Qualcomm denies the allegations in Paragraph 291.

292. Qualcomm denies the allegations in Paragraph 292, except refers to the cited opinions for their contents.

293. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

294. Qualcomm denies the allegations in Paragraph 294, except refers to the '725 patent for its contents.

295. Qualcomm states that the allegations in Paragraph 295 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 295.

296. Qualcomm states that the allegations in Paragraph 296 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 296.

297. Qualcomm states that the allegations in Paragraph 297 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 297.

298. Qualcomm states that the allegations in Paragraph 298 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 298, except states that Apple purports to seek declaratory relief in its Complaint.

299. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

300. Qualcomm denies the allegations in Paragraph 300.

301. Qualcomm denies the allegations in Paragraph 301.

302. Qualcomm denies the allegations in Paragraph 302, except refers to the cited opinions for their contents.

303. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

304. Qualcomm denies the allegations in Paragraph 304, except refers to the '469 patent for its contents.

305. Qualcomm states that the allegations in Paragraph 305 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 305.

306. Qualcomm states that the allegations in Paragraph 306 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 306.

307. Qualcomm states that the allegations in Paragraph 307 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 307.

308. Qualcomm states that the allegations in Paragraph 308 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 308, except states that Apple purports to seek declaratory relief in its Complaint.

309. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

310. Qualcomm denies the allegations in Paragraph 310.

311. Qualcomm denies the allegations in Paragraph 311.

312. Qualcomm denies the allegations in Paragraph 312, except refers to the cited opinions for their contents.

313. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

314. Qualcomm denies the allegations in Paragraph 314, except refers to the '819 patent for its contents.

315. Qualcomm states that the allegations in Paragraph 315 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 315.

316. Qualcomm states that the allegations in Paragraph 316 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 316.

317. Qualcomm states that the allegations in Paragraph 317 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 317.

318. Qualcomm states that the allegations in Paragraph 318 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 318, except states that Apple purports to seek declaratory relief in its Complaint.

319. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

320. Qualcomm denies the allegations in Paragraph 320.

321. Qualcomm denies the allegations in Paragraph 321.

322. Qualcomm denies the allegations in Paragraph 322, except refers to the cited opinions for their contents.

323. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

324. Qualcomm denies the allegations in Paragraph 324, except refers to the '021 patent for its contents.

325. Qualcomm states that the allegations in Paragraph 325 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 325.

326. Qualcomm states that the allegations in Paragraph 326 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 326.

327. Qualcomm states that the allegations in Paragraph 327 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 327.

328. Qualcomm states that the allegations in Paragraph 328 state a legal conclusion to which no response is required. To the extent a response is required, Qualcomm denies the allegations in Paragraph 328, except states that Apple purports to seek declaratory relief in its Complaint.

329. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

330. Qualcomm denies the allegations in Paragraph 330.

331. Qualcomm denies the allegations in Paragraph 331.

332. Qualcomm denies the allegations in Paragraph 332, except refers to the cited opinions for their contents.

333. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

334. Qualcomm denies the allegations in Paragraph 334.

335. Qualcomm denies the allegations in Paragraph 335.

336. Qualcomm denies the allegations in Paragraph 336, except refers to the U.S. Supreme Court's opinion in *Quanta Computer, Inc. v. LG Elecs., Inc.*, No. 06-937, for its contents.

337. Qualcomm denies the allegations in Paragraph 337.

338. Qualcomm denies the allegations in Paragraph 338, except states that Qualcomm and Apple have entered certain agreements, and refers to those agreements for their contents.

339. Qualcomm denies the allegations in Paragraph 339.

340. Qualcomm denies the allegations in Paragraph 340.

341. Qualcomm denies the allegations in Paragraph 341.

342. Qualcomm denies the allegations in Paragraph 342, except states that Apple purports to seek declaratory relief in its Complaint.

343. Qualcomm denies the allegations in Paragraph 343.

344. Qualcomm denies the allegations in Paragraph 344.

345. Qualcomm denies the allegations in Paragraph 345.

346. Qualcomm denies the allegations in Paragraph 346.

347. Qualcomm denies the allegations in Paragraph 347.

348. Qualcomm denies the allegations in Paragraph 348.

349. Qualcomm denies the allegations in Paragraph 349.

350. Qualcomm denies the allegations in Paragraph 350.

351. Qualcomm denies the allegations in Paragraph 351.

352. Qualcomm denies the allegations in Paragraph 352.

353. Qualcomm denies the allegations in Paragraph 353.

354. Qualcomm denies the allegations in Paragraph 354.

355. Qualcomm denies the allegations in Paragraph 355.

356. Qualcomm denies the allegations in Paragraph 356.

357. Qualcomm denies the allegations in Paragraph 357, except refers to the U.S. Supreme Court's opinion in *FTC v. Actavis, Inc.*, No. 12-416, for its contents.

358. Qualcomm denies the allegations in Paragraph 358.

359. Qualcomm denies the allegations in Paragraph 359.

360. Qualcomm denies the allegations in Paragraph 360, except states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding Apple's purported track record, and therefore Qualcomm denies the allegations regarding Apple's purported track record.

361. Qualcomm denies the allegations in Paragraph 361, except states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding Apple's incentives, and therefore Qualcomm denies the allegations regarding Apple's incentives.

362. Qualcomm denies the allegations in Paragraph 362, except states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding Apple's incentives, and therefore Qualcomm denies the allegations regarding Apple's incentives.

363. Qualcomm denies the allegations in Paragraph 363, except states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding Apple's incentives, and therefore Qualcomm denies the allegations regarding Apple's incentives.

364. Qualcomm denies the allegations in Paragraph 364, except refers to the opinion in *Bendix Corp. v. Belax, Inc.*, Nos. 17343, 17344 (7th Cir.), for its contents.

365. Qualcomm denies the allegations in Paragraph 365, except states that (i) China's NDRC issued an Administrative Sanction Decision in connection with its investigation of Qualcomm on February 9, 2015; (ii) Qualcomm implemented a Rectification Plan, dated February 9, 2015, in connection with the NDRC's Administrative Sanction Decision; (iii) the NDRC published a press release on February 10, 2015, stating that Qualcomm's Rectification Plan satisfied its Administrative Sanction Decision; and (iv) the FTC filed the FTC Complaint on January 17, 2017. Qualcomm refers to the foregoing documents for their contents. Qualcomm states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding the European Commission's findings, and therefore Qualcomm denies the allegations regarding the European Commission's findings.

366. Qualcomm denies the allegations in Paragraph 366.

367. Qualcomm denies the allegations in Paragraph 367.

368. Qualcomm denies the allegations in Paragraph 368.

369. Qualcomm denies the allegations in Paragraph 369.

370. Qualcomm denies the allegations in Paragraph 370, except states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding device manufacturers' purported preferences, and therefore Qualcomm denies the allegations regarding device manufacturers' purported preferences.

371. Qualcomm denies the allegations in Paragraph 371.

372. Qualcomm denies the allegations in Paragraph 372, except states that it is without knowledge or information sufficient to form a belief as to the truth of the allegations regarding non-Qualcomm suppliers' conveyance of intellectual property rights, and therefore Qualcomm denies the allegations regarding non-Qualcomm suppliers' conveyance of intellectual property rights.

373. Qualcomm denies the allegations in Paragraph 373.

374. Qualcomm denies the allegations in Paragraph 374.

375. Qualcomm denies the allegations in Paragraph 375.

376. Qualcomm denies the allegations in Paragraph 376.

377. Qualcomm denies the allegations in Paragraph 377.

378. Qualcomm denies the allegations in Paragraph 378.

379. Qualcomm denies the allegations in Paragraph 379, except states that Apple is a high-volume purchaser of cellular chipsets, and that certain benefits may come from being a component supplier to Apple.

380. Qualcomm denies the allegations in Paragraph 380.

381. Qualcomm repeats and realleges its responses to the preceding Paragraphs with the same force and effect as if fully restated herein.

382. Qualcomm denies the allegations in Paragraph 382, except refers to California Business & Civil Code § 17200, *et seq.* (the "UCL") for its contents.

383. Qualcomm denies the allegations in Paragraph 383, except refers to the opinion in *Columbia Metal Culvert Co. v. Kaiser Aluminum & Chem. Corp.*, No. 77-1846 (3d Cir.), for its contents.

384. Qualcomm denies the allegations in Paragraph 384.

385. Qualcomm denies the allegations in Paragraph 385, except refers to the opinion in *Cel-Tech Commc'ns, Inc. v. L.A. Cellular Tel. Co.*, No. S066735 (Cal.), for its contents.

386. Qualcomm denies the allegations in Paragraph 386.

387. Qualcomm denies the allegations in Paragraph 387.

388. Qualcomm denies the allegations in Paragraph 388.

389. Qualcomm denies the allegations in Paragraph 389, except states that Apple purports to seek certain relief in its Complaint.

Qualcomm denies the allegations in Paragraphs A-U of Apple's "Prayer for Relief", except states that Apple purports to seek certain relief in its Complaint.

DEFENSES

Qualcomm asserts the following defenses. Apple's claims also are barred in whole or in part for the reasons set forth in Qualcomm's counterclaims filed herewith, and the defenses set forth below incorporate the factual allegations of Qualcomm's counterclaims by reference. In asserting these defenses, Qualcomm does not assume the burden of proof with respect to any issue as to which applicable law places the burden of proof on the Plaintiff.

Qualcomm reserves the right to assert additional defenses, as warranted by facts learned through investigation and discovery, and expressly reserves the right to amend its answer to assert such additional defenses.

First Defense

Apple's complaint, and each and every claim stated therein, fails to state a claim on which relief can be granted.

Second Defense

Apple's claims are barred in whole or in part by the applicable statutes of limitations, including, but not limited to, California Business and Professions Code § 17208 and 15 U.S.C. § 15b.

Third Defense

Apple's claims are barred in whole or in part by the doctrine of laches.

Fourth Defense

Apple's claims are barred in whole or in part by the doctrine of estoppel.

Fifth Defense

Apple's claims are barred in whole or in part by the doctrine of waiver.

Sixth Defense

Apple's claims are barred in whole or in part by the doctrine of unclean hands.

Seventh Defense

Apple's claim for breach of contract is barred in whole or in part because Apple breached the Cooperation Agreement, and therefore excused Qualcomm from its obligations.

Eighth Defense

Apple's claim for breach of contract is barred in whole or in part because of its claims filed in this and other lawsuits around the world.

Ninth Defense

Apple's claim for breach of contract is barred because Apple breached the covenant of good faith and fair dealing implied in every contract governed by California law, and therefore excused Qualcomm from its obligations.

Tenth Defense

Apple's claim for breach of contract is barred because Apple has not suffered any damages from any such alleged breach.

Eleventh Defense

Apple's claim for breach of contract is barred by the doctrine of misunderstanding to the extent there was no meeting of the minds on the meaning of Section 7 of the Cooperation Agreement.

Twelfth Defense

Apple's claims are barred in whole or in part because Qualcomm's interpretation of Section 7 of the Cooperation Agreement does not constitute a liquidated damages provision under California Civil Code § 1671(b).

Thirteenth Defense

Apple's claims are barred in whole or in part because they are non-justiciable.

Fourteenth Defense

Apple's claims for declaratory relief are barred in whole or in part because there is no active case or controversy under the Declaratory Judgment Act, 28 U.S.C. §§ 2201-2202, and Apple is seeking an advisory opinion.

Fifteenth Defense

Apple's claims are barred in whole or in part because Qualcomm's alleged conduct did not unreasonably restrain trade and was lawful, pro-competitive, and based on legitimate business and economic justifications.

Sixteenth Defense

Apple's claims are barred in whole or in part by the *Illinois Brick* doctrine, which prohibits antitrust recovery by indirect purchasers.

Seventeenth Defense

Apple's claims are barred in whole or in part because Apple has not suffered antitrust injury or any injury of the type the antitrust laws were intended to prevent.

Eighteenth Defense

Apple's claims are barred in whole or in part because it has sustained no injury in fact or damages proximately caused by any act or omission of Qualcomm.

Nineteenth Defense

Apple's claims are barred in whole or in part because any damages that Apple purports to have suffered are too remote or speculative to allow recovery, and it is impossible to ascertain and allocate such alleged damages with reasonable certainty.

Twentieth Defense

Apple's claims are barred in whole or in part because of ratification, agreement, acquiescence or consent to Qualcomm's alleged conduct.

Twenty-First Defense

Apple's claim under California's Unfair Competition Law is barred in whole or in part because the alleged business practices are not unlawful, unfair, or fraudulent, within the meaning of California Business & Professions Code § 17200 or otherwise.

Twenty-Second Defense

Any monetary damages under California Business and Professions Code §17200, *et seq.*, are barred in their entirety by those statutes and other applicable legal authority.

Twenty-Third Defense

Apple's claims are barred in whole or in part because it lacks standing.

Twenty-Fourth Defense

Apple's claims seeking to disgorge royalties paid through the contract manufacturers are barred in whole or in part because Apple lacks standing.

Twenty-Fifth Defense

To the extent that Apple has suffered damages, if at all, it has failed to take reasonable measures to mitigate its damages in whole or in part, and is barred from recovering damages that it could have reasonably avoided.

Twenty-Sixth Defense

To the extent that Apple has suffered damages, if at all, all damages were caused by Apple's own actions.

Twenty-Seventh Defense

To the extent that Apple has suffered damages, if at all, its damages are subject to offset in the amount of any obligations Apple owes Qualcomm.

Twenty-Eighth Defense

Apple is not entitled to injunctive relief because any alleged injury to Apple is not immediate or irreparable and Apple has an adequate remedy at law.

Twenty-Ninth Defense

Apple's claims are barred in whole or in part because it is not entitled to restitution or disgorgement of profits.

Thirtieth Defense

Apple's claims are barred in whole or in part because any recovery would result in unjust enrichment to Apple.

Thirty-First Defense

Apple's claims are barred in whole or in part because Qualcomm has satisfied its FRAND commitments.

Thirty-Second Defense

Apple's claims are barred in whole or in part because Apple is an unwilling licensee.

Thirty-Third Defense

Apple's claims are barred in whole or in part because Qualcomm has not violated competition law.

Thirty-Fourth Defense

Apple's claims are barred in whole or in part because, at all relevant times, Qualcomm complied with all applicable federal and state laws and regulations.

Thirty-Fifth Defense

Apple is not entitled to interest, attorney's fees or costs in connection with this action.

COUNTERCLAIMS

Counterclaim-Plaintiff Qualcomm Incorporated ("Qualcomm"),[2] by its undersigned counsel, alleges, with knowledge with respect to its own acts and on information and belief as to other matters, as follows:

NATURE OF THE ACTION

1. Qualcomm is the world's leading innovator of cellular technology. Its inventions form the very core of modern cellular communications. No company has done more to develop the technology that enables cellular networks and systems; no company does more today to create and improve that technology for the next generation; and no company can match the breadth, quality, or value of Qualcomm's cellular patent portfolio. Hundreds of cellular device suppliers around the world have taken licenses from Qualcomm—or have sourced their products from a manufacturer that has a license with Qualcomm—all on terms that reflect the established market value of Qualcomm's patent portfolio.

2. Apple is the world's most profitable seller of cellular devices. But as a late-comer to the cellular industry, Apple contributed virtually nothing to the development of core cellular technology. Instead, Apple's products rely heavily on the cellular inventions of Qualcomm and others. Apple's iPhones and other products enjoy enormous commercial success, but without lightning-fast cellular connectivity—enabled in large part by Qualcomm's inventions—Apple's iPhones would lose much of their consumer appeal. Apple has built the most

[2] Qualcomm Incorporated is the parent company. One division of Qualcomm Incorporated is Qualcomm Technology Licensing ("QTL"), which grants licenses or otherwise provides rights to use portions of Qualcomm Incorporated's intellectual property portfolio. Qualcomm Incorporated's separate subsidiary, Qualcomm Technologies, Inc. ("QTI"), operates substantially all of the products and services businesses owned by Qualcomm Incorporated, including Qualcomm CDMA Technologies ("QCT"), and substantially all of its engineering, research, and development functions. For ease of reference only, in these Counterclaims, QTL, QTI, and QCT will be referred to herein as "Qualcomm".

successful consumer products in history by relying significantly on cellular technologies pioneered by Qualcomm.

3. Now, Apple wants to pay far less than fair value for a license to Qualcomm's patents.

4. Apple cannot credibly contest the value of Qualcomm's patent portfolio, as hundreds of licensees—including the companies that manufacture Apple's cellular devices—have consistently paid royalties reflecting that value to Qualcomm for years. So Apple has attempted to force Qualcomm to accept less than fair value for the use of its intellectual property by wielding its immense power over Qualcomm and by engaging in a host of unlawful acts, including at least the following:

- Apple failed to uphold its end of the bargain in the parties' Business Cooperation and Patent Agreement (the "Cooperation Agreement"), by, among other things, intentionally giving government agencies false and misleading information and testimony about Qualcomm;
- Apple interfered, and continues to interfere, with Qualcomm's long-standing contracts with the manufacturers of Apple's cellular devices, causing them to withhold nearly [redacted] in royalties owed to Qualcomm;
- Apple has withheld approximately [redacted] owed to Qualcomm under another contract relating to a high-speed feature of Qualcomm's chipset;
- Apple chose not to utilize certain high-performance features of the Qualcomm chipsets for the iPhone 7 (preventing consumers from enjoying the full extent of Qualcomm's innovation); and then, when the Qualcomm-based iPhones still outperformed the Intel-based iPhones, Apple (i) falsely claimed that there was "no discernible difference" between iPhones with Qualcomm's chipsets and iPhones

with Intel's chipsets, and (ii) acted to prevent Qualcomm from revealing to consumers the extent to which iPhones with Qualcomm's chipsets outperformed iPhones with Intel's chipsets; and

- Apple materially breached the parties' Master Software Agreement by [redacted]

5. Apple's goal is clear—to leverage its immense power to force Qualcomm into accepting less than fair value for the patented technologies that have led innovation in cellular technology and helped Apple generate more than $760 billion in iPhone sales.

6. Qualcomm asserts these counterclaims to enforce its contractual rights, to receive fair value for its intellectual property, and to stop Apple's unlawful attacks.

7. ***Qualcomm Pioneered the Development of Core Cellular Technologies.*** Since its founding in 1985, Qualcomm has been designing, developing, and improving cellular communication systems, networks, and products—successfully inventing numerous core technologies that have transformed how the world communicates. Qualcomm invented fundamental technologies at the heart of 2G, 3G, and 4G cellular communications, is leading the industry to 5G, and has contributed innumerable additional innovations used in virtually every modern cell phone. Over the past three decades, Qualcomm has invested more than $40 billion in research and development. From 2010 to 2016, Qualcomm typically spent more than 20% of its revenue per year on R&D. Qualcomm's nearly 20,000 engineers continue to push the boundaries of cellular and other mobile technology through groundbreaking innovation. Qualcomm's patent portfolio currently includes more than 130,000 issued patents and patent applications worldwide.

8. Qualcomm's technologies enable the cellular ecosystem that allows smartphones to send and receive vast amounts of data and voice communications at rapid speeds, seamlessly and reliably, from anywhere within reach of a cellular network. Qualcomm's inventions are necessary for *the entire cellular network* to function—they are not limited to technologies in modem chipsets or even cell phones. For example, Qualcomm's technological contributions enable popular smartphone apps such as Uber, Snapchat, Spotify, Apple Music, Skype, Google Maps, and Pokémon GO, among others.

9. Rather than keep its core inventions to itself, Qualcomm chose to patent its inventions, contribute them to standards bodies, and voluntarily license them to cellular device manufacturers. As a result, companies have been able to use Qualcomm's technology to create the products and experiences that consumers enjoy today. Qualcomm, through its licensing division, QTL, now has license agreements with hundreds of companies covering 3G and 4G cellular technologies and products.

10. Separate from its licensing business, Qualcomm's subsidiary, Qualcomm Technologies, Inc., QTI, designs industry-leading components, such as chipsets and associated software. QTI's cellular components are sold (and the associated software is licensed) for use in the manufacture and operation of cellular devices. QTI has consistently been the leader in bringing to market cutting-edge chipsets—sometimes years ahead of the competition.

11. Qualcomm's patent portfolio is priced and licensed separately from the pricing and sale of QTI's components. A Qualcomm licensee pays the same royalty to Qualcomm for a license to Qualcomm's patent portfolio regardless of whether its licensed cellular devices use components supplied by QTI's subsidiary, the licensee itself, or another QTI competitor.

12. ***Apple Has Built the Most Profitable Company in the World, Relying Heavily on Qualcomm's Patented Technologies.*** With a market capitalization of more than $700 billion, $246 billion in cash reserves, and a global sphere of influence, Apple has more money and influence than many countries. Relying heavily on Qualcomm technology, Apple has become the dominant player in cell phone sales. Apple's dominance has grown every year since the iPhone's launch in 2007. In recent years, Apple has captured upwards of *90 percent of all profits* in the smartphone industry.

13. But Apple achieved its success without contributing much, if anything, to the innovations at the heart of cellular communications. Apple has long recognized that Qualcomm and others developed the essential cellular technologies used by its products today. In fact, Apple has publicly admitted that the full value of its products is realized *only* when the underlying cellular technology—such as 4G LTE—adequately enables their capabilities. Qualcomm was hard at work developing LTE before Apple introduced the first 2G iPhone.

14. ***Apple Has Voluntarily Chosen To Operate Through Long-standing, Independent License Agreements Between Qualcomm and the Contract Manufacturers.*** When Apple sought to commercialize the iPhone in the mid-2000s, it needed to ensure that the phones would be licensed to practice Qualcomm's technologies. Apple, for its own commercial reasons, chose not to take a *direct* license from Qualcomm, though Qualcomm has always been willing to negotiate a direct license with Apple.

15. Instead of entering into a direct license agreement with Qualcomm, Apple decided (i) to outsource manufacturing of its iPhones and iPads to other companies (the "Contract Manufacturers"); and (ii) to rely on those Contract Manufacturers' existing license agreements with Qualcomm. At the time Apple made the decision not to take a direct license, Apple's iPhones did not use any

chipsets or other products purchased from Qualcomm. Thus, chipset supply could not have played any role in Apple's decision.

16. Apple claims that Qualcomm has used its alleged power with respect to certain chipsets to force unfair licensing terms on Apple. But the facts tell a different story. Each of Qualcomm's license agreements with the Contract Manufacturers was signed *before* Apple used any Qualcomm chipset in its products. Some were signed before Apple had sold even a single iPhone. And the relevant licensing terms stayed the same when Apple began using Qualcomm chipsets in iPhones in 2011.

17. The terms of the Contract Manufacturers' license agreements with Qualcomm and the royalties they pay were negotiated regardless of which chipset supplier the Contract Manufacturers were using. The agreements have always been wholly independent of which suppliers' chipsets the Contract Manufacturers use in the phones they manufacture for Apple (or for any of their other customers).

18. The Contract Manufacturers' license agreements are generally similar to the license agreements Qualcomm has entered into with hundreds of other cellular device manufacturers. The terms of such licenses are customary in the cellular industry. Indeed, virtually every significant cellular device manufacturer in the cellular industry has recognized the value of Qualcomm's technology and entered into a license agreement with Qualcomm—taking a license to Qualcomm's portfolio of patents and calculating royalties as a percentage of the net selling price of the device, generally subject to per unit running royalty caps. The royalties payable to Qualcomm by the Contract Manufacturers are a mere fraction of the price that Apple charges consumers for its iPhones. Indeed, Qualcomm's per-device royalties for its portfolio of tens of thousands of patents are far less than what Apple charges consumers for a basic plastic phone case.

19. Since the release of the first 3G iPhone nearly a decade ago, the Contract Manufacturers have been consistently paying Qualcomm royalties under

their license agreements, based on their sales to Apple of the cellular devices they manufacture.

20. ***Apple Rejected Qualcomm's FRAND Offer for a Direct License.*** Although Apple benefits from the Contract Manufacturers' license agreements, Qualcomm and Apple have had on-and-off negotiations about a potential direct license agreement for years. Most recently, Qualcomm and Apple engaged in negotiations regarding a direct license agreement from 2015 until Apple filed this lawsuit. At Apple's request, in July 2016, Qualcomm extended a written, fair, reasonable, and nondiscriminatory ("FRAND") licensing offer to Apple for Qualcomm's 3G and 4G standard-essential patents ("SEPs").

21. Apple rejected Qualcomm's offer and indicated that it was unwilling to negotiate a license only for Qualcomm's cellular SEPs. Apple then requested a license to far more patents than the license Apple had initially requested from Qualcomm and claimed that the value of Qualcomm's patents was substantially less than their fair-market value. Apple sought a license to all patents that Qualcomm disclosed as potentially essential to 3G and 4G standards, and even swept in patents and applications that may apply to future 5G standards that are still under development. For all this, Apple offered to pay Qualcomm royalties of approximately [redacted] per phone, a small fraction of the royalty that other smartphone vendors would pay for a comparably priced phone.

22. To appreciate the unreasonableness of Apple's offer, one need only compare it to the royalties that Apple demands for its own patents. In Apple's recent litigation with Samsung, Apple argued that just three Apple patents on touch-screen features ("pinch-to-zoom", "tap-to-zoom", and "bounce-back") were worth a reasonable royalty of $7.14 per phone. That is, Apple claims that only *three* of its patents on these features are worth [redacted] what Apple is willing to pay for Qualcomm's thousands of patents, taken together, on fundamental technologies that are essential to cellular communication. It is neither

fair nor reasonable to contend, as Apple does, that the cumulative value of years of Qualcomm innovation driving core cellular technology pales in comparison to the value of just three Apple user-interface patents.

23. ***Apple Has Engaged in Unlawful Tactics To Avoid Paying Fair Value for Qualcomm's Technology.*** In an effort to obtain a below-market price for Qualcomm's technology, Apple has launched an unlawful attack on Qualcomm's business. Apple's various lawsuits against Qualcomm are simply another step in its aggressive strategy of constructing commercial disputes and then claiming it has been victimized. After bringing this lawsuit in January, Apple filed other lawsuits against Qualcomm in China, the United Kingdom, and Japan. This tactic is familiar to those in the industry; Apple has previously accused its suppliers and rivals alike (such as Nokia and Samsung) of unlawful monopolization when they have sought compensation for the use of their patents. In an effort to reduce its supply costs, Apple—the wealthiest company in the world—repeatedly has cast itself as an antitrust "victim". But the facts refute any such notion. In reality, these lawsuits are designed to enhance Apple's already formidable negotiating leverage.

24. Apple's global attack against Qualcomm has included the following unlawful acts:

25. *First, Apple wrongfully induced regulatory action against Qualcomm and then falsely accused Qualcomm of extortion.* In doing so, Apple failed to uphold its end of the bargain under the parties' Cooperation Agreement.

26. In early 2013, Qualcomm and Apple entered into the aptly named Business Cooperation and Patent Agreement. The contract was clear: Qualcomm would make substantial payments to Apple for a variety of consideration, but *only so long as* Apple satisfied its own obligations under the Agreement.

27. In its Complaint, Apple misrepresents the nature of the Cooperation Agreement, stating that the "sole purpose" of Qualcomm's payments under the Agreement was "to reduce Apple's royalty burden". That is not true. Each party to

the Cooperation Agreement provided meaningful value to the other. In particular, Qualcomm's payments under the Cooperation Agreement were in exchange for, among other things, promises from Apple that it (i) would cooperate with Qualcomm in the development and deployment of certain technologies, (ii) would not launch various patent attacks against Qualcomm or its customers, and (iii) would not actively induce or initiate litigation—including investigations by government agencies—against Qualcomm. These contractual provisions reflect Qualcomm's attempt to limit Apple's ability to abuse its leverage over Qualcomm. Although Apple now characterizes the Cooperation Agreement differently for litigation purposes, Qualcomm expected to receive significant value from Apple for the payments it agreed to make under the Agreement.

28. Qualcomm has been relieved of its obligation to make Cooperation Agreement payments to Apple because, among other reasons, Apple has misled government agencies around the world about Qualcomm's business practices in order to induce regulatory proceedings against Qualcomm. As merely one example, on August 17, 2016, Apple told the Korea Fair Trade Commission ("KFTC") that "Apple has yet to add a [second chipset] supplier because of Qualcomm's exclusionary conduct". But when Apple made that statement to the KFTC, it already had added Intel as a second baseband chip supplier and had purchased Intel chips to incorporate in the iPhone 7, which was only a few weeks away from its September release. Apple already knew that every iPhone 7 offered for sale in Korea would incorporate an Intel chip, not a Qualcomm chip. Apple's statement to the KFTC was false.

29. Following Apple's misstatements, as the parties were attempting to resolve the Cooperation Agreement dispute in late 2016, *Apple asked* Qualcomm to propose ways in which Apple could address Qualcomm's concerns about Apple's misstatements. In response, Qualcomm suggested corrections that Apple could provide to the KFTC to help mitigate some of the damage its misstatements had

caused. What Apple now repeatedly portrays as "extortion" in its Complaint was, in reality, merely Qualcomm responding to Apple's request.

30. At the time, Apple presented its request for clarifying statements it could provide to the KFTC as a peace offering to Qualcomm. Qualcomm responded with good-faith suggestions on how Apple could clarify and correct the record before the KFTC. Apple now claims that Qualcomm's suggestions were "extortion". Not only is that a false accusation, but it mischaracterizes Qualcomm's good-faith effort to resolve a dispute *by responding to Apple's request*.

31. *Second, to apply even more pressure on Qualcomm, Apple has directly interfered with Qualcomm's long-standing license agreements with the Contract Manufacturers.* Apple's tortious interference has violated both the parties' Cooperation Agreement (thereby extinguishing Qualcomm's payment obligations) and California law.

32. As explained above, the Contract Manufacturers voluntarily entered into their license agreements with Qualcomm, and they have consistently paid Qualcomm royalties on both Apple products and non-Apple products for years. But in another example of Apple wielding its enormous commercial leverage over its suppliers, Apple has intentionally caused at least some of the Contract Manufacturers to withhold payments from Qualcomm. Due to Apple's direct interference, certain Contract Manufacturers have failed to pay Qualcomm nearly [redacted] in royalties, and the prospect of Apple's continued interference threatens significant additional injury to Qualcomm.

33. Separately, for years, Apple has pressured the Contract Manufacturers not to cooperate with audits that Qualcomm—through independent royalty auditors—has the right to conduct under the Contract Manufacturers' license agreements. As a result, Qualcomm has been unable to verify the accuracy of the Contract Manufacturers' royalty reports.

34. *Third, Apple misrepresented the performance of iPhones with Qualcomm chips and prevented Qualcomm from telling consumers about the superiority of its chips.* Some versions of Apple's latest iPhone (iPhone 7) incorporate Qualcomm chipsets, while others incorporate Intel chipsets. Apple effectively chose to limit the performance of the Qualcomm-based iPhones by not taking advantage of the full potential speed of which Qualcomm's modems are capable. Apple's actions were intended to prevent consumers from realizing that iPhones containing Qualcomm chipsets performed far better than iPhones containing chipsets supplied by Intel.

35. Apple not only deprived Qualcomm of the opportunity to have consumers appreciate Qualcomm's best technology, but Apple also attempted to prevent Qualcomm from disclosing the superior performance of its chipsets to the public. Even after Apple chose not to utilize speed-increasing features for the Qualcomm-based iPhones, independent studies revealed that Qualcomm chipsets continued to outperform Intel chipsets. To try to prevent disclosure of the performance disparity between the Qualcomm chipset and the Intel chipset, Apple told Qualcomm that it would be "unacceptable" for Qualcomm to make or sponsor any public comparisons between the Qualcomm-based iPhone and the Intel-based iPhone. Apple warned that if Qualcomm engaged in or sponsored such comparisons, Apple would use the marketing resources at its disposal to "retaliate" against Qualcomm and that Qualcomm's standing as an Apple chipset supplier would be jeopardized. But Apple stated publicly—and falsely—that there was "no discernible difference" between iPhones using Intel chipsets and iPhones using Qualcomm chipsets. Apple's conduct violates California unfair competition law.

36. *Fourth, Apple is improperly withholding approximately* [redacted] *in payments that it owes Qualcomm under a contract for a high-speed chipset feature called "carrier aggregation".* Apple owes approximately [redacted] under the parties' contract known as the Statement of Work, dated February 28,

2013 (the "2013 SOW"). Apple has *admitted* that it owes approximately [redacted] under that contract, but refuses to pay even that undisputed sum unless Qualcomm releases its claim to the full amount that Apple owes and otherwise accedes to Apple's demands. Apple's refusal to pay constitutes a breach of the 2013 SOW and is further evidence of Apple's coordinated attack on Qualcomm's business.

37. *Fifth, Apple has breached its obligations under the parties' Master Software Agreement by* [redacted]

38. ***Apple's Conduct Has Violated Multiple Laws and the Parties' Agreements.*** By selectively disclosing terms of the parties' confidential agreements, Apple has told a one-sided—and inaccurate—story.

39. Apple has disproportionate bargaining power, uses that power to force Qualcomm (and other suppliers) into accepting unfair and unreasonable terms, and has abused its power by launching unfounded attacks on Qualcomm in an attempt to force Qualcomm into accepting lower royalties.

40. Apple's global attack on Qualcomm's business has caused and continues to cause significant harm to Qualcomm. Qualcomm brings these counterclaims to seek redress for and prevent future threatened harm from Apple's tortious interference with Qualcomm's contracts, breach of the parties' 2013 SOW,

breach of the parties' Cooperation Agreement (and its implied covenant of good faith and fair dealing), unjust enrichment, unfair business practices, and material breach of the parties' Master Software Agreement. Qualcomm seeks declaratory relief, injunctive relief, compensatory damages, punitive damages, restitution, and attorneys' fees.

PARTIES

41. Qualcomm is a Delaware corporation with its principal place of business at 5775 Morehouse Drive, San Diego, California. Qualcomm is recognized as an industry leader and innovator in the field of wireless technologies. Qualcomm has more than 130,000 patents and patent applications around the world relating to cellular technologies and other cutting-edge technologies. Qualcomm derives a substantial portion of its revenues and profits from licensing its intellectual property. QTI's subsidiary sells chipsets, and associated software, for cell phones and other cellular devices. Qualcomm has developed technologies enabling the 2G, 3G, and 4G families of cellular standards for cellular devices, and is a leader in developing forthcoming 5G technologies.

42. Apple is a California corporation with its principal place of business at 1 Infinite Loop, Cupertino, California. Apple designs, markets, and sells throughout the world cellular devices that implement the 2G, 3G, and 4G families of cellular standards.

JURISDICTION AND VENUE

43. This court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. § 1367, and Qualcomm seeks declaratory relief pursuant to 28 U.S.C. §§ 2201(a) and 2202.

44. This Court has personal jurisdiction over Apple because it is organized and exists under the laws of California.

45. Venue is proper in this District because Apple brought this action and thereby consented to venue. Alternately, venue is proper in this District pursuant to

28 U.S.C. § 1391(b)-(d). Additionally, venue is proper in this District pursuant to the forum-selection clauses in the parties' Cooperation Agreement and the parties' Master Software Agreement.

FACTUAL ALLEGATIONS

I. Qualcomm's Role in the Development of Cellular Technology.

46. Qualcomm has played the leading role in the creation and advancement of modern cellular communication technologies.

47. When Qualcomm was founded in 1985, cell phones were cumbersome, heavy devices. They supplied only voice communications, with inconsistent quality, to limited numbers of mostly wealthy consumers who could afford the devices and the expensive per-minute charges for using them. Early networks were very limited and inefficient—audio quality was poor, users sometimes heard portions of others calls, handoffs were noisy, and calls frequently dropped.

48. Today, cell phones are remarkably powerful devices delivering reliable voice service and lightning-speed data and mobile computing to billions of consumers around the world at affordable prices.

49. Achieving this level of performance was the result of the efforts of Qualcomm and a handful of other industry pioneers that developed new and radically more efficient technologies enabling cellular systems, networks, and products. Qualcomm's innovative technological contributions—repeatedly recognized as best in class—have driven growth in the cellular communications industry and lowered costs for device manufacturers, carriers, and consumers.

50. Apple, on the other hand, has played little to no role in developing cellular communication technologies.

A. The Fundamental Technology That Enables Cellular Communications.

51. Cellular communications are constrained by the radio spectrum over which voice and data travel. Like real estate, radio spectrum is a limited, albeit

invisible, physical resource, and the steadily increasing use of wireless communications means steadily increasing demand for the same limited supply of bandwidth. Radio spectrum is considered so valuable that in 2015, when the U.S. Federal Communications Commission ("FTC") held an auction for the rights to use very limited portions of spectrum in the United States, the successful carriers, Verizon and AT&T, collectively paid close to $45 billion for the rights to use the auctioned spectrum.

52. Cellular communications are also constrained by performance requirements, such as voice quality, call drop rate, average downlink and uplink data rates, maximum downlink and uplink data rates, coverage, battery life, and the need to deliver quality services to as many users as possible at the same time.

53. Thus, cellular communications pose a number of fundamental system-engineering challenges—namely, designing communication systems and methodologies that allow both user equipment (such as cell phones) and network equipment (such as base stations—the cell towers that detect signals and connect them to the cellular network) to share efficiently the capacity of the available radio spectrum, while still meeting performance requirements.

54. To satisfy the ever-growing demand for more users, more data, and higher speeds, engineers must develop systems that allow more information to travel over the limited available spectrum. Specifically, engineers must address how cellular devices interact with the network, and vice versa, including developing efficient and reliable methods to encode and transmit data through the spectrum, "multiple access" technology that allows multiple devices to use the same slice of spectrum at the same time, and protocols that coordinate communications between base stations at the cell towers and cellular devices.

55. This technology endeavors to accomplish several important (and sometimes competing) goals: (i) make the most efficient use of the scarce spectrum available; (ii) work within the size and power constraints of handheld devices,

which need to be small, lightweight, and power-efficient; and (iii) enable efficient networks and ongoing compatibility from generation to generation of cellular standards. The utility of any cellular device, including Apple's iPhone, depends critically on this enabling technology.

56. Qualcomm has been pioneering such enabling technology for more than 30 years.

B. Qualcomm Has Been, and Continues To Be, the Leader in Cellular R&D.

57. To conduct its R&D and other business activities, Qualcomm employs approximately 20,000 engineers in more than 40 countries. Qualcomm also has invested tens of billions of dollars in R&D focused on cellular and wireless communications technology. For example, between 2014 and 2016 alone, Qualcomm invested at least $5 billion in R&D every year—an average of more than 20% of its revenue each year. Those investments, which place Qualcomm at the forefront of the cellular communications industry, have produced numerous industry-changing innovations in wireless and other technologies.

58. Qualcomm's unparalleled commitment to R&D has allowed it to continue offering pioneering innovations to the cellular industry. Qualcomm has driven the development and commercialization of successive generations of cellular technology and, today, is one of only a handful of companies driving the next-generation 5G standard.

C. The Standardization of Cellular Communications Technology.

59. To put Qualcomm's significance to the cellular industry in context, it is important to understand how cellular standards have developed since cell phones were introduced in the 1980s.

60. Standardization endeavors to bring together the best engineering resources to develop and identify the optimal solution to enormously complex

engineering challenges. Standard-development organizations ("SDOs") are at the center of this process. The main SDOs in the wireless telecommunications industry have set up a partnership, called 3GPP, where hundreds of companies work together to identify technical problems and create solutions called "standards". 3GPP sets requirements, including performance requirements, for successive generations of cellular technology and then develops technical specifications that provide the functionality, reliability, and spectral capacity needed to meet those requirements. The SDOs that formed the 3GPP partnership then convert these specifications to standards that are used worldwide.

61. These SDOs work through 3GPP to foster technological advancement by focusing development in areas most beneficial to the cellular industry at large—carriers, infrastructure manufacturers, cellular device manufacturers, and others—and to the general public. One of the key roles of these SDOs is to develop, approve, and promulgate thousands of detailed, complex technical specifications that enable cellular communications to function. Each new generation of cellular technology has depended on numerous inventions from a small number of innovators around the globe. The most significant of these innovators is Qualcomm.

62. Cell phones, by definition, are useful only if they can communicate with a network. Yet today, cell phones are manufactured or supplied by hundreds of different companies around the world, while multiple companies also design and manufacture cellular infrastructure such as base stations. Thus, one important function of standardization is to ensure compatibility, allowing devices from any manufacturer to operate on a given network, and on networks around the world.

63. But the cellular standards-development process is not just a selection among a variety of available and equally viable options, such as picking a standard shape for electrical outlets and plugs. Instead, SDOs consistently set goals for next-generation cellular standards that demand capabilities and performance levels that

the existing generation of technology has not yet achieved, while maintaining flawless compatibility with existing networks. SDOs thus set the agenda for innovators' R&D efforts, and vice versa, in an iterative process that drives innovators to invent important new technologies. Innovators propose their technology approaches, along with considerable justification, as a part of the standardization process for the next generation. The engineers participating in the standard setting process (some of whom represent implementers that make no contributions to the standard) evaluate the technology approaches and develop the standard by choosing those technologies that meet the standard's requirements and will be optimal for the operation and success of the standard as a whole.

D. The Evolution of Cellular Standards.

64. The first commercial cell phone networks in the United States were deployed in 1983. These first generation (1G) networks relied on analog radio technology that had barely changed since World War II. Call quality was poor, and signals often crossed into neighboring frequencies, causing interference and dropped calls.

65. Demand for cellular communications nonetheless grew rapidly, increasing from approximately 200,000 users in 1985 to more than 1.5 million users in 1988. As a result, network operators grew increasingly desperate for new technology that could accommodate the user surge.

66. By the mid-to-late 1980s, a possible solution emerged: digital technology called Time Division Multiple Access ("TDMA"). TDMA compressed the data representing voice calls and then transmitted those data in alternating time slots, enabling multiple users and conversations to share the same frequency. TDMA could accommodate roughly three times as many phone calls within a given amount of spectrum as could an analog system. TDMA was not without problems, including poor voice quality and dropped calls. Yet, by the late 1980s, the

European Union (which had become the *de facto* arbiter of cellular standards) decided that its 2G wireless networks would use a TDMA standard known as the Global System for Mobile communications ("GSM"), and TDMA appeared primed to become the 2G standard of choice worldwide.

67. That changed in 1989 when Qualcomm, then a small start-up company, transformed the cellular industry by introducing Code Division Multiple Access ("CDMA"). CDMA was initially introduced as a groundbreaking 2G cellular technology that vastly improved the capacity of cellular networks and the quality of cellular service. A CDMA system uses codes to allow a large number of users to communicate at the same time, sharing the same frequency channel. CDMA offered far better call clarity than TDMA and could accommodate more than three times the number of calls than TDMA for the same spectrum.

68. Despite CDMA's advantages over TDMA, the commercialization of CDMA technology proved to be a risky and difficult endeavor. Qualcomm devoted substantial time and resources demonstrating that CDMA was not only technically superior but also commercially feasible. Ultimately, Qualcomm's efforts resulted in the adoption of the IS-95 standard by the Telecommunications Industry Association, and the successful deployment of CDMA wireless networks in the United States and elsewhere.

69. By the late 1990s, the cellular industry was thriving. However, 2G technologies proved unable to achieve the industry goals of increased speed, reliability, and efficiency driven by consumer demand. The focus therefore shifted to 3G technologies.

70. Qualcomm's innovative solutions formed the basis of 3G. Indeed, all three of the 3G variations that achieved commercial importance worldwide were based on Qualcomm's CDMA innovation: (i) the "CDMA2000" standard; (ii) the Wideband Code Division Multiple Access ("WCDMA") standard; and (iii) the hybrid Time Division Synchronous Code Division Multiple Access

("TD-SCDMA") standard (developed primarily for use in China). Although these 3G standards differ in some respects and compete in some geographies, all three are based on Qualcomm's breakthrough CDMA technology.

71. The high data rates provided by CDMA, along with new cell phone features, changed the ways people used their devices, in that data—not just phone calls—became a core part of the user experience. Available radio spectrum once again became overwhelmed by heavy traffic. The industry needed to take another step forward.

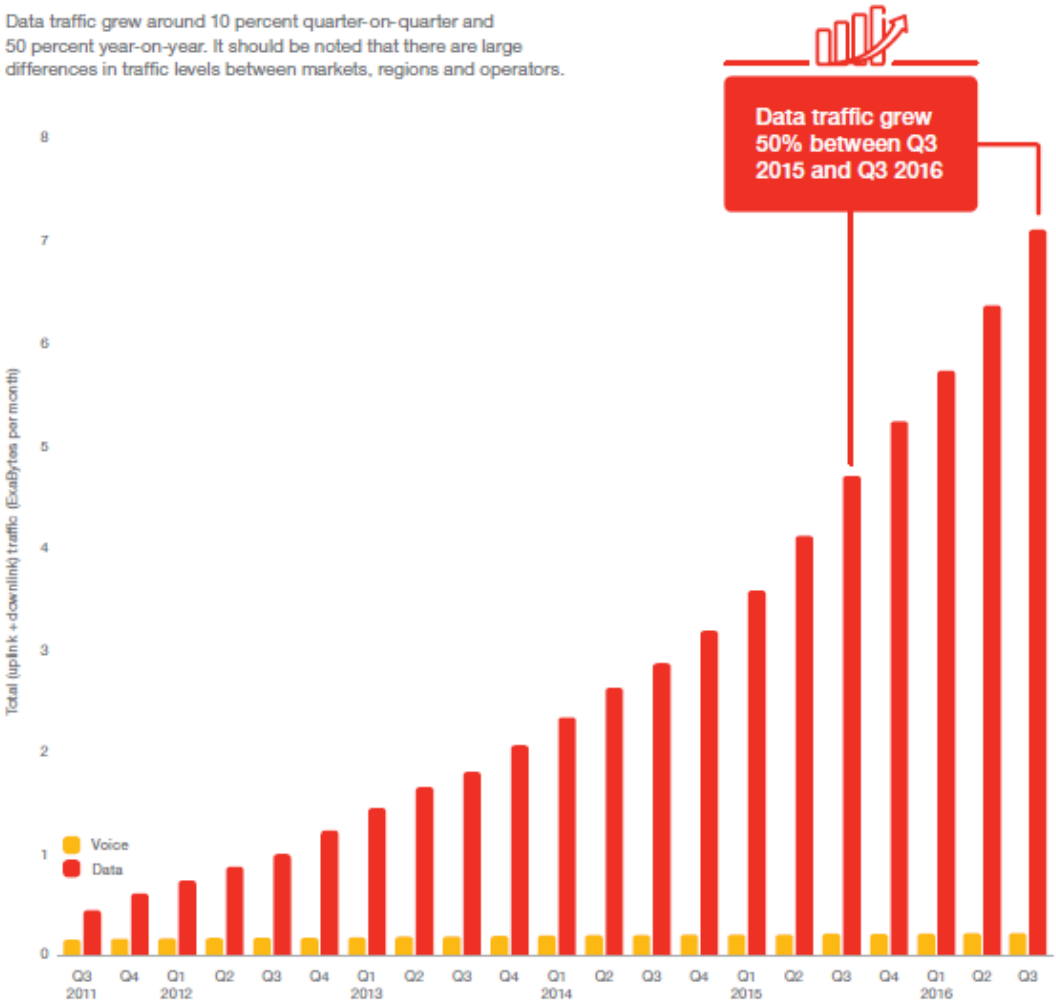
72. Led by Qualcomm's efforts, 3G technology became significantly more advanced with the releases of major enhancements. This led to the adoption of "3.5G" and "3.75G" standards, such as High Speed Downlink Packet Access ("HSDPA"), High Speed Packet Access ("HSPA"), and Evolved High Speed Packet Access ("HSPA+"). Those technologies increased data speeds exponentially.

73. Qualcomm did not stop with 3.75G. In fact, Qualcomm began researching 4G technologies years before those technologies were standardized, and a decade before their significant commercial rollout. As various industry players worked on 4G technologies, Qualcomm made fundamental technological contributions that propelled the industry's smartphone revolution forward. In 2006, Qualcomm acquired another OFDMA innovator, Flarion Technologies, and combined its innovations and research teams and efforts with Qualcomm's own. Together with Flarion, Qualcomm pioneered the application of Orthogonal Frequency Division Multiple Access ("OFDMA") and Single-Carrier Frequency Division Multiple Access ("SC-FDMA") to cellular systems.

74. OFDMA and SC-FDMA became the basis for the 4G standards, known broadly as Long-Term Evolution ("LTE"). These innovations once again expanded network capacity and vastly boosted data rates to speeds well beyond those of 3G, 3.5G, and 3.75G systems.

75. Finding ways to substantially increase data transfer on a limited amount of spectrum was the true impetus behind the smartphone revolution. By 2010, the cellular world had changed so dramatically that, for the first time, the majority of cellular transmissions consisted of data, not voice calls. Today, cellular systems are primarily occupied by transmission of enormous quantities of data (such as email, files, pictures, streaming video, and music), with voice traffic constituting only a tiny fraction of cellular transmissions, as illustrated in Figure 1 below.

Fig. 1: Worldwide Mobile Voice and Data Traffic, 2011-2016



Source: Ericsson Mobility Report, November 2016.

76. Even now, with Qualcomm still leading the way, new iterations of LTE technologies are being introduced, allowing gigabit per second data speeds for networks that have upgraded to the most recent releases of LTE standards. Thanks to Qualcomm's continuing innovations, 4G LTE networks offer data speeds *thousands of times* faster than the cellular technology that existed when Qualcomm brought its first major CDMA breakthrough to the world.

77. It is 3G and 4G technology—enabled in large part by Qualcomm—that allows today's smartphones to send and receive vast amounts of data at previously unimagined speed. The fast and reliable transfer of data facilitates other innovative technologies, like precise positioning used for many apps, and has propelled smartphones to be the fastest-selling consumer electronic devices in history. In fact, by 2015, smartphones were outselling personal computers four to one.

78. While Qualcomm has been—and continues to be—a leading contributor to every cellular standard, up to and including LTE and the emerging 5G technologies, Apple has played virtually no role in their development. But Apple itself has recognized how critical modern cellular networks are to smartphones used around the world today and to Apple's iPhone in particular. As Apple CEO Tim Cook stated, advanced LTE technology can "unleash the power and capability of the iPhone in a way that an older network . . . would not."

79. Qualcomm's innovations are set to form the core of the next-generation 5G standard. Once again, Qualcomm's technologies promise to vastly improve the capabilities of cellular devices, networks, and systems—by, among other things, multiplying data speeds, increasing reliability, and reducing the latency of communications.

II. Qualcomm's Patent Portfolio, Standard-Essential Patents, and the Meaning of FRAND.

80. As a result of its massive investments in R&D, Qualcomm owns the cellular industry's leading patent portfolio. Qualcomm makes licenses to its patent

portfolio broadly available to manufacturers and suppliers of cell phones and other cellular devices.

81. Qualcomm's portfolio—which consists of more than 130,000 patents and patent applications—includes patents that are "essential" to cellular standards, patents that are "essential" to other standards, and patents that are not essential to any industry standard but reflect valuable non-standardized technologies.

82. A patent is considered "essential" to a cellular standard when an aspect of the standard cannot, as a technical matter, be implemented without practicing at least one claim in the patent. Such patents are called standard-essential patents, or SEPs, at the time of standardization. Qualcomm's broad portfolio of cellular SEPs includes inventions that are practiced by modem chips, inventions that are practiced by other components, inventions that are practiced by combinations of components, inventions that are practiced only by complete cellular devices, and inventions practiced only by cellular devices interacting with a network or even just the network itself.

83. By contrast, a non-standard-essential patent ("NEP") is not technically necessary to practice any feature of a standard. But an NEP may cover an invention that provides important functionality and value to cellular devices or systems and may be highly desired by consumers or cellular device manufacturers or suppliers. As a result of its decades-long commitment to cellular and other mobile R&D, Qualcomm owns tens of thousands of cellular SEPs and NEPs.

A. R&D Risks.

84. There are significant risks associated with investing in R&D to try to improve cellular systems and communications. Costly technology development efforts often fail. Some efforts result in technologies that are innovative but not commercially successful, often for reasons beyond the inventor's control. Other efforts are technologically and commercially successful, but may not lead to

revenue until far in the future. And, because intellectual property (*e.g.*, patented innovations in the field of wireless communications) is intangible, it faces a heightened risk of misappropriation by others (especially after it is disclosed to an SDO) as compared to physical objects.

85. These basic risks inherent in R&D investments are compounded when the technologies are developed for and contributed to an industry standard, such as WCDMA or LTE. Innovators in industries in which technology is standardized, like the wireless industry, bear the additional risks that—even if they succeed in developing an effective technology—their innovations will not be included in the standard, or the standard will not be commercially successful.

86. Finally, as part of the standard-development process, before an innovator's technology is included in a standard, the innovator must make that technology known to manufacturers—potentially including its own direct competitors—several years before it can even hope to obtain payment in return in the form of royalties. Generally, a major standard is finalized and approved years before products that implement the standard come to market. By agreeing to disclose proprietary technology so that it can be used in the implementation of a standard, the innovator sacrifices a measure of the technological head-start its R&D investments could earn, instead providing competitors ample time to learn and develop products using that technology. Once standard-compliant products come to market, manufacturers may postpone making fair payments to the innovators who invested in the development of the standard—even while those manufacturers reap profits only made possible by the patented innovations.

B. The FRAND Commitment.

87. Major SDOs have attempted to balance the need to encourage innovators to contribute to standards, on the one hand, with the need for implementers of standards to have access to the innovators' intellectual property to

make standard-compliant products, on the other hand. Patent licensing—and the enforcement of patent rights when the patents are not licensed—are critical to this balance.

88. The most important and influential SDO in the cellular communications industry (and the SDO relevant to this action) is the European Telecommunications Standards Institute ("ETSI"). ETSI has more than 800 members from 67 countries and five continents. ETSI's Intellectual Property Rights ("IPR") policy expressly acknowledges the need to balance reward for innovation and access to standardized technology:

> "[T]he ETSI IPR POLICY seeks to reduce the risk to ETSI, MEMBERS, and others applying ETSI STANDARDS . . . , that investment in the preparation, adoption and application of STANDARDS could be wasted as a result of an ESSENTIAL IPR for a STANDARD . . . being unavailable. In achieving this objective, the ETSI IPR POLICY seeks a *balance between the needs of standardization for public use in the field of telecommunications and the rights of the owners of IPRs*." (ETSI IPR Policy ¶ 3.1 (emphasis added).)

89. To balance the need for adequate rewards for SEP holders and the need for wide access to SEPs, ETSI requests that SEP holders agree to make licenses available for certain specified rights under their SEPs on "fair, reasonable and non-discriminatory", or FRAND, terms and conditions. A patentee makes a FRAND commitment to an SDO voluntarily, with the understanding that it will be entitled to seek FRAND royalties from licensees of its SEPs in the future.

90. A FRAND commitment creates a contractual obligation between a SEP holder and an SDO. Qualcomm's FRAND commitments to ETSI govern its licensing of its 3G and 4G SEPs, on which Apple's iPhones and other cellular devices depend.

91. What is considered "fair and reasonable" is intentionally given wide latitude by ETSI's IPR policy. When determining whether the terms and scope of a proposed license are fair and reasonable, accepted industry terms and conditions, as

well as widely accepted terms for a particular portfolio of SEPs, are compelling evidence. Certain industry practices have come to be accepted as FRAND.

92. For example, it has long been accepted in the cellular industry that the common practice of calculating royalties as a percentage of the net selling price of the entire device (*e.g.*, the iPhone) is consistent with a SEP holder's FRAND commitment.

93. Similarly, it is common practice for a SEP holder with a large number of patents to license those patents as a single portfolio, rather than to negotiate single-patent licenses one by one. In March 2016, a German court found that where the plaintiff-patentee had "consistently offered a worldwide portfolio license", "[t]his does not give rise to any [FRAND] concerns", as it "corresponds to a well-established licensing practice". *Saint Lawrence Commc'ns v. Vodafone*, docket number 4a O 73/14, at 14, 19, Düsseldorf Regional Court (Mar. 31, 2016). Not surprisingly given this background, Apple's request for an offer from Qualcomm, as well as its own most recent counteroffer to take a license to Qualcomm's technology, were for various kinds of portfolio licenses. The Contract Manufacturers' agreements, on which Apple has depended for a decade, are not patent-by-patent licenses.

94. In fact, consistent with ETSI's IPR policy and the long-standing industry practice among major SEP holders, Qualcomm's license agreements with cellular device manufacturers all include a portfolio of cellular SEPs for certain standards. Many also include certain patents and applications that are essential to non-cellular standards, as well as certain NEPs. Those agreements often grant rights to practice Qualcomm's cellular SEPs for the specified standards at any time during the term of the agreement, plus many other patents and applications owned by Qualcomm as of an agreed-upon date. This type of broad license is what almost all licensees have sought, as licensees recognize the impracticality of conducting a separate license negotiation for each of Qualcomm's thousands of patents.

95. Apple recognized this industry practice and practical reality when it sued Nokia-related entities in December 2016, exactly one month before it sued Qualcomm. *See* Complaint ¶ 35, *Apple Inc. v. Acacia Research Corp., et al.*, No. 16-cv-7266 (N.D. Cal., filed Dec. 20, 2016). In that action, Apple alleged that the licensing practices of Nokia and its affiliated entities were not FRAND in part because their conduct precluded Apple from obtaining a single license to their collective portfolio of patents. Apple complained that Nokia deprived Apple of its right to "a single licensing negotiation for a single royalty" for Nokia's entire patent portfolio. In this lawsuit against Qualcomm, Apple takes exactly the opposite position, asserting that Qualcomm's "[f]ail[ure] to offer an individual license on a patent-by-patent basis (or a patent family-by-patent family basis) violates Qualcomm's FRAND obligation."

96. FRAND's "non-discrimination" principle is intended to prevent licensors from offering similar packages of value to similarly situated parties on materially different terms. As such, widespread industry acceptance of broadly similar licensing terms is a strong indication that an offer including such terms is consistent with FRAND. In its lawsuits against Qualcomm and other SEP owners, Apple has sought discriminatory royalties that are far lower than those its competitors have received and paid for many years, and far lower than the royalties Apple's Contract Manufacturers have paid.

III. Qualcomm's Long History with the Contract Manufacturers.

97. Over the past two decades, Qualcomm entered into license agreements with the Contract Manufacturers. The terms of the Contract Manufacturers' license agreements are entirely consistent with ETSI's IPR policy. And those agreements have been integral to the success of Apple's cellular devices.

98. Time and again, Apple has chosen to continue relying on the Contract Manufacturers' license agreements, instead of entering a direct license agreement

with Qualcomm. But despite the enormous commercial success Apple has achieved under this arrangement, Apple has now tortiously disrupted the Contract Manufacturers' long-standing relationships with Qualcomm in an effort to pay less than fair-market royalties for Qualcomm's intellectual property.

A. Qualcomm Entered into License Agreements with the Contract Manufacturers over the Past Two Decades.

99. Apple does not manufacture iPhones and iPads itself. Instead, it pays third-party manufacturers in China and Taiwan to construct its devices. The Contract Manufacturers that manufacture Apple's iPhones and iPads are: (i) Foxconn, (ii) Pegatron, (iii) Wistron, and (iv) Compal. Each of the Contract Manufacturers also manufactures products for other cellular device suppliers. And each has a longstanding business relationship with Qualcomm that is independent of Apple.

100. Each Contract Manufacturer, like virtually every other major cellular device manufacturer in the world, has each taken a royalty-bearing license to Qualcomm's intellectual property.

101. Long before Apple sold its first cellular device in 2007, Qualcomm began entering into license agreements ("Subscriber Unit License Agreements") with the Contract Manufacturers:

- Qualcomm's license agreement with Compal became effective on February 10, 2000;
- Qualcomm's license agreement with Foxconn became effective on October 18, 2005;
- Qualcomm's license agreement with Wistron became effective on May 23, 2007; and
- Qualcomm's license agreement with Pegatron became effective on April 29, 2010.

102. Under their license agreements, the Contract Manufacturers have been able to use Qualcomm's intellectual property to manufacture cellular devices, including Apple's iPhones and iPads, as well as other companies' products.

B. The Contract Manufacturers' License Agreements Are Consistent with ETSI's IPR Policy.

103. Contrary to Apple's allegations, Qualcomm's license agreements with the Contract Manufacturers are fully consistent with ETSI's IPR policy.

104. Each of the Contract Manufacturers negotiated with Qualcomm at arm's length and chose to sign an agreement with Qualcomm that grants it certain rights, including a broad, portfolio-wide license to Qualcomm's patents.

105. Each of the Contract Manufacturers' license agreements provides rights to practice Qualcomm's cellular SEPs for the specified standards at any time during the term of the agreement, plus many other patents and applications owned by Qualcomm as of an agreed-upon date.

106. For example, in Foxconn's agreement with Qualcomm, [redacted]

107. The royalties for devices under each of the Contract Manufacturers' license agreements are calculated as a percentage of the net selling price of the entire device (*e.g.*, the iPhone).

108. Qualcomm's license agreements with the Contract Manufacturers are on terms broadly similar to the license agreements Qualcomm has entered with many other companies, which have all recognized the enormous value that Qualcomm's intellectual property provides to their cellular devices.

109. The Contract Manufacturers' license agreements with Qualcomm have been integral to the success of Apple's cellular devices.

C. Qualcomm's Intellectual Property Provides Tremendous Value to Apple's Products.

110. Apple needs some form of access to Qualcomm's patent portfolio because Apple's cellular devices could not function without the use of Qualcomm's intellectual property. Without such access, Apple would infringe Qualcomm's patents. Apple itself has acknowledged that Qualcomm's intellectual property enables cellular devices' downstream function and value.

111. Qualcomm's inventions are not limited to technologies in modem chipsets or even cell phones. Qualcomm's intellectual property reads on everything from a single chip to the *entire mobile network*, and it is recognized for driving value to the entire device.

112. Qualcomm's contributions to the "system" level of cellular communications have been game-changing: Qualcomm vastly improved data transfer rates (both download and upload speeds) and significantly lowered the cost of transferring that data; Qualcomm increased the capacity of the cellular spectrum by making the use of that spectrum far more efficient, enabling carriers to accommodate more consumers and demand on their networks; Qualcomm made it easier for consumers to use data and make voice calls at the same time; Qualcomm reduced the static and interference that once made many cell phone calls unintelligible; Qualcomm enabled longer use time and battery life through more efficient radio access techniques. The list goes on.

113. Qualcomm's intellectual property also enables numerous important features on the iPhone. To name a few examples, thanks to Qualcomm's innovations:

- The iPhone can be used as a WiFi hotspot and stream ultra-high-definition (4K) videos.

- The iPhone benefits from longer battery life, an auto-lock feature, higher resolution, "Application Switching", a dual antenna, and "Airplane Mode".
- The iPhone includes assisted GPS technology, which makes possible location-based services such as Google Maps, turn-by-turn navigation, finding nearby restaurants, and many other location-based features and apps such as Uber.

114. Above all, the iPhone's value to consumers is driven by its ability to connect with and transfer voice and data over cellular networks at rapid speeds—a capability heavily dependent on Qualcomm's intellectual property. The iPhone's value to users depends largely on this capability, because many of the most popular apps today—including Snapchat, Instagram, Spotify, Apple Music, Facebook, YouTube, Uber, Google Maps—are centered around downloading or uploading data-intensive images, maps, videos, or music wherever one is and whenever one needs them.

115. As the respected author Thomas L. Friedman recently explained: "Most people think that they can watch *Game of Thrones* on their cell phone because Apple came out with a better phone. No, Apple gave you a larger screen and better display, but the reason [the video streams smoothly] is because Qualcomm and AT&T and others invested billions of dollars in making the wireless network and phones more efficient." *Thank You for Being Late* 80-81 (2016).

116. On an April 2016 earnings call, while explaining the weak sales of iPhones in India, Apple CEO Tim Cook confirmed the iPhone's dependence on high-speed cellular connectivity for its success:

> "The LTE roll-out with India just really begins this year. That will unleash the power and capability of the iPhone in a way that an older network, 2.5G or even some 3G networks, would not do."

117. Similarly, on an October 2016 earnings call, Tim Cook again explained how 4G cellular technology drives the value and user experience on the iPhone:

> "[T]here are enormous investments going on in 4G, and we couldn't be more excited about that because *it really takes a great network working with iPhones to produce that great experience for people.*" (emphasis added)

118. Apple's public statements show that Apple recognizes the immense value of Qualcomm's intellectual property. Nevertheless, each time Apple and Qualcomm have discussed entering into a direct license agreement, Apple has refused to agree to fair market terms.

D. Apple Has Repeatedly Chosen To Rely on the Contract Manufacturers' License Agreements Instead of Taking a Direct License from Qualcomm.

119. Over the past decade, as an alternative to relying on Qualcomm's license agreements with the Contract Manufacturers, Qualcomm and Apple have periodically discussed a direct license agreement. Those discussions began as early as 2007, when Apple considered—but ultimately declined—to sign a license agreement with Qualcomm. Importantly, at the time, Apple was not using any Qualcomm components, and could therefore negotiate a direct license without regard to chip supply. However, Apple chose not to enter into a direct license agreement at that time—or since.

120. In 2010, Qualcomm and Apple revisited the possibility of a direct license agreement, but Apple decided to continue to rely on the Contract Manufacturers' license agreements. In 2012, the parties again discussed entering a direct license agreement to replace the Contract Manufacturers' license agreements (as to the devices they make for Apple), but did not reach a deal.

121. Most recently, from 2015 into 2017, Apple and Qualcomm engaged in negotiations regarding a direct license agreement. But as before, those discussions ended without Apple signing a license agreement.

122. As a result, Apple has continued to rely on the Contract Manufacturers' license agreements—and, in the process, has become the most successful cellular device company in history.

123. However, despite the unprecedented success Apple has achieved while relying on the Contract Manufacturers' license agreements, Apple has tortiously interfered (repeatedly) with the Contract Manufacturers' long-standing relationships with Qualcomm.

E. Apart from Apple's Interference, the Contract Manufacturers Have Consistently Abided by the Terms of Their License Agreements with Qualcomm.

124. Until recently, for many years, the Contract Manufacturers successfully operated under their license agreements and paid royalties to Qualcomm on Apple and non-Apple products alike. In fact, each Contract Manufacturer began paying royalties before Apple was its customer; thus, each Contract Manufacturer paid Qualcomm royalties on non-Apple products before paying royalties on Apple products.

125. Whether the products made by the Contract Manufacturers are Apple or non-Apple, the royalty terms are the same, and the Contract Manufacturers have consistently paid under their agreements.

126. It is only now—17 years after the first Contract Manufacturer entered into a license agreement with Qualcomm—that the Contract Manufacturers have collectively withheld nearly [redacted] in royalties due under their license agreements. And by its own admission, Apple is responsible for this change of course by the Contract Manufacturers.

127. Apple's interference in the Contract Manufacturers' license agreements is part of its larger strategy to pay less than fair value for Qualcomm's intellectual property. As part of that same campaign, Apple has alleged that Qualcomm unlawfully uses its power as a supplier of chipsets and software to force

onerous licensing terms on Apple. But that is not and cannot be true. Apple's theory ignores that each of Qualcomm's license agreements with the Contract Manufacturers was entered into *before* Apple ever used a single Qualcomm chipset in any Apple product—and further ignores that the terms of the Contract Manufacturers' license agreements did not change when Apple began using Qualcomm chipsets. The Contract Manufacturers' licensing terms were not affected by whether Apple used a Qualcomm chipset or a competitor's chipset in its iPhones.

IV. Qualcomm's Chipset and Software Relationship with Apple.

128. In addition to its patent licensing business, Qualcomm today is also a major supplier of chips and related software used in cellular devices. Independent of the patent licensing business, QTI's subsidiary supplies a variety of customized integrated circuits for use in cellular devices (*e.g.*, phones, tablets, or other computing devices). Qualcomm's core chip products that it provides to Apple for cellular devices are: (i) the baseband modem chip, which processes received voice and data information and prepares the same for transmission; (ii) radio frequency chips, which transmit and receive radio signals utilizing one or more frequencies; (iii) the power management chip, which optimizes power consumption across a cellular device; and (iv) chipsets that include a combination of the above products as well as other hardware elements to support the functionality of a cellular device. Each class of chip described above is sold in competition with a number of other suppliers. Qualcomm leads the industry in the development of new chipset technology.

129. Qualcomm also separately licenses its cutting-edge software that runs on, and controls, the operation of its chipsets. Qualcomm devotes massive resources to the development of its software, which includes millions of lines of code and is a critical part of the product solutions that Qualcomm offers.

Qualcomm makes its software available to its customers under a software license (which is not a patent license) that is negotiated and executed by entities within Qualcomm's chip business, rather than within the patent licensing business.

A. Apple's Use of Qualcomm's Chipsets and Software.

130. Apple currently uses Qualcomm's chipsets in many of its cellular devices. But this was not the case for the generations of the iPhone launched between 2007 and 2010. From 2007 to 2010, Apple relied exclusively on chipsets made by Infineon (which was acquired by Intel in 2011).

131. As the iPhone's technological needs grew more sophisticated, Apple began to look for a new chipset supplier capable of better meeting those needs. Due to Qualcomm's ability and willingness to meet Apple's exacting technical and schedule demands, as well as the superior quality of Qualcomm's chipsets, by around 2010 Apple had decided that it would begin using Qualcomm cellular chipsets in iPhones. From 2011 until the fall of 2016, Qualcomm was the only cellular chipset supplier used by Apple for new (*i.e.*, non-legacy) iPhones. But that changed in September 2016, when Apple released the iPhone 7 and 7 Plus. Some iPhone 7 models still use Qualcomm chipsets; others now use Intel chipsets.

132. Apple does not purchase chipsets directly from Qualcomm. The Contract Manufacturers purchase the chipsets and manufacture the iPhones and other cellular devices, which they then sell to Apple for global distribution.

B. Qualcomm Provides Technical Assistance That Is Critical to the Success of the iPhone.

133. Apple not only uses Qualcomm's superior chipsets, but also routinely demands and receives specialized technical solutions from Qualcomm's world-class engineers. Qualcomm goes to great lengths to serve Apple by providing any assistance Apple demands, [redacted] For example:

- Qualcomm pioneered self-testing chipset technology and a remote chipset testing method used by Apple, which has [redacted]

[redacted]

- Qualcomm helped Apple transition to 4G/LTE by [redacted] that was critical to the successful launch of the iPhone 5.
- Qualcomm offered Apple an "envelope tracking" solution, which helps the iPhone save power and reduces heat when transmitting at different signal strengths.
- Qualcomm assigns numerous engineers [redacted]
- Qualcomm devised a [redacted].
- Qualcomm helped [redacted].
- Qualcomm developed a [redacted]

134. All told, Qualcomm's chipsets, software, and technical assistance have been critical to the continued success of Apple's cellular devices.

V. The Complex Contractual Relationship Between Qualcomm and Apple.

135. Understanding Qualcomm and Apple's business relationship requires an understanding of the key contracts between the parties. Although Apple attempts to characterize itself as powerless against Qualcomm, the opposite is true. As the terms of the parties' agreements and negotiating history make clear, Apple has substantial leverage over Qualcomm and has used that leverage to impose onerous terms on Qualcomm.

136. *Marketing Incentive Agreement.* Although the first iPhone debuted with 2G technology, Apple recognized that it would need to use a more advanced

technology for future releases. During lengthy negotiations, Apple threatened to use its reputation and influence to steer the cellular industry away from Qualcomm's CDMA-based technology, and toward the inferior WiMAX technology, unless Qualcomm agreed to make large marketing payments to Apple. Apple's threat, if executed, would have deprived consumers of the benefits of CDMA-based technology, and deprived Qualcomm of royalties for the use of its superior CDMA-based technology.

137. Accordingly, on January 8, 2007, Qualcomm signed the Marketing Incentive Agreement ("MIA") with Apple. The MIA required Qualcomm to make payments to Apple in exchange for Apple announcing that it would use certain technologies in its iPhones.

138. *Strategic Terms Agreement.* Apple launched the first iPhone in June 2007. The second iPhone was launched in 2008 and implemented CDMA-based 3G standards. While Apple's 3G-capable iPhones have relied extensively on Qualcomm's patented technologies for nearly a decade, the early iPhones did not use chipsets or software from Qualcomm. Instead, the first four generations of iPhones launched from 2007 through 2010 used Infineon (now Intel) chipsets.

139. In 2008, Apple's iPhone sales grew significantly compared to the year before, making it easily the fastest growing smartphone. In 2009, iPhone sales continued to expand—more than doubling the total from 2008.

140. As the iPhone's technological needs evolved, Infineon's chipsets and software could not provide the power, flexibility, and reach that Apple needed. As a result, on December 16, 2009, while Apple was still exclusively using Infineon chipsets in the iPhone, Apple and Qualcomm entered into the Strategic Terms Agreement ("STA"). The STA specified terms related to Qualcomm's supply of components to the Contract Manufacturers for Apple's products, should Apple decide at some point in the future to use Qualcomm's chipsets in its products.

141. While Qualcomm was forced to give supply commitments and assurances to Apple in the STA, Apple refused to commit to procure any components from Qualcomm.

142. *Master Software Agreement.* The STA provided that Qualcomm would deliver software used to operate chipsets pursuant to a separate software agreement. On September 20, 2010, Qualcomm and Apple entered into the Master Software Agreement ("MSA").

143. The MSA grants Apple a limited license to Qualcomm's copyrighted software, governs Qualcomm's provision of that software to Apple, and imposes a number of restrictions on Apple's use of that software and associated copyrights. It is not a patent license. The MSA also contemplates that the parties will enter into software addenda for specific software products, which they have done on a number of occasions since 2010.

144. *Transition Agreement.* A few months prior to the launch of the Qualcomm-based iPhone 4, *Apple* drafted a proposed Transition Agreement and asked Qualcomm to sign it. [redacted]

145. Apple and Qualcomm signed the Transition Agreement on February 11, 2011. Under the terms of the Transition Agreement, Apple required Qualcomm to commit to pay Apple up to [redacted] as an incentive for Apple to procure Qualcomm's chipsets for use in its devices. Qualcomm made that payment commitment without any guarantee of how many Qualcomm chipsets would be procured by Apple. This arrangement required Qualcomm to make substantial investments (in addition to the [redacted] in incentive payments) in product development just to secure Apple's business—without any guarantee of a return on that investment. The Transition Agreement provided that Apple would forego or reimburse portions of the [redacted] only under certain conditions.

146. In its Complaint, Apple misstates the nature of the Transition Agreement and the parties' negotiating positions. Apple claims that Qualcomm forced Apple "to deal exclusively with Qualcomm on the purchase of chipsets". But, in fact, it was *Apple's* draft of the Transition Agreement that included the term about which it now complains.

147. Further, the Transition Agreement does not in fact require Apple to deal exclusively with Qualcomm, as Apple demonstrated when it began purchasing approximately [redacted] of its chipsets from Intel while the amended Transition Agreement was still in effect.

148. On January 1, 2013, Apple and Qualcomm entered into the First Amendment to the Transition Agreement ("ATA"). The ATA retained the general structure of the Transition Agreement, but required Qualcomm to pay yet additional incentives to Apple.

149. *The Business Cooperation and Patent Agreement.* Around the same time the parties were amending and extending the Transition Agreement, Apple demanded a replacement agreement for the MIA, which was due to expire in late 2012. Apple and Qualcomm therefore entered into the Cooperation Agreement as of January 1, 2013. The Cooperation Agreement required Qualcomm to pay Apple hundreds of millions of dollars, but only if certain conditions were met.

150. Apple also misrepresents the nature and terms of the Cooperation Agreement in its Complaint. Apple alleges that the "sole purpose" of Qualcomm's payments under the Cooperation Agreement was "to reduce Apple's royalty burden in exchange for exclusivity". The terms of the contract make clear, however, that Qualcomm's payments under the Cooperation Agreement are in exchange for other valuable consideration from Apple, including, among other things, Apple's promise (i) not to initiate, or actively induce a third party to initiate, litigation (including regulatory investigations) against Qualcomm; and (ii) not to assert its patents against Qualcomm. Apple's patent standstill commitment provided

Qualcomm with assurance that Apple would not disrupt Qualcomm's ability to provide its chipsets to other customers, and Apple agreed not to assert its patents against Qualcomm for certain past sales even after expiration of the Cooperation Agreement. In other words, the parties negotiated for complete peace. For that, Qualcomm agreed to make large payments to Apple each quarter.

151. The parties also agreed to various other forms of business cooperation. For example, the parties agreed that Apple would support CDMA in its iPhones and certain iPads and that senior executives of Apple and Qualcomm should meet at least semi-annually to review Qualcomm's products and industry trends and to consider new technology opportunities that may be of mutual benefit. This was a significant provision for Qualcomm given Apple's enormous buying power and its ability to either reward or punish suppliers like Qualcomm.

152. The terms of the Cooperation Agreement reflect the parties' agreed-upon goal of working together in good faith. As explained in more detail below, Apple did not honor its contractual commitment and instead launched a global attack against Qualcomm.

153. *The 2013 Statement of Work.* The STA provided the *general* terms for Qualcomm's supply of components to the Contract Manufacturers for Apple's products. Pursuant to the STA, Apple and Qualcomm subsequently entered into various "statements of work" that provided the *specific* requirement that Qualcomm supply the components at issue, and also dictated the supply terms for each new model of Qualcomm chipset used in Apple's products. Apple and Qualcomm entered into one such Statement of Work on February 28, 2013 (the "2013 SOW"), to govern the supply of multiple models of Qualcomm's chipsets to the Contract Manufacturers.

154. Qualcomm's MDM9625 chipset, which is governed by the 2013 SOW, has a built-in feature related to "carrier aggregation" technology. Carrier aggregation is a technology supported by advanced 4G networks that offers

increased bandwidth and faster data speeds. Qualcomm played a leading role in developing carrier aggregation technology and making it mainstream. Apple's MDM9625 chipset-based device was to be the first iPhone that supported this technology.

155. In negotiating the terms of the 2013 SOW, [redacted] Instead, Apple insisted that payment be made only upon the occurrence of certain triggering events.

156. As discussed below, more than one of those conditions has since been satisfied, triggering Apple's obligation to pay for the carrier aggregation feature in MDM9625 chipsets. In total, Apple owes Qualcomm approximately [redacted] in carrier aggregation payments under the 2013 SOW. Apple has admitted to owing approximately [redacted] of that amount but, to date, Apple has paid nothing.

157. *The ASTA, the iPhone 7 Statement of Work and the STA Assignment Agreement.* The STA was first amended on February 28, 2013; the resulting Amended and Restated Strategic Terms Agreement ("ASTA") contained largely the same terms. In negotiations regarding the ASTA, [redacted] The STA was further amended by the parties' Statement of Work, dated December 7, 2015 (the "iPhone 7 Statement of Work"), and accompanying STA Assignment Agreement.

158. In the iPhone 7 Statement of Work and STA Assignment Agreement, Apple forced Qualcomm to agree to unprecedented supply commitments. For example, even if Apple [redacted] Qualcomm must continue to supply chipsets for use in Apple products [redacted] In

addition, Qualcomm must continue to supply chipsets for use in Apple products [redacted]

159. [redacted]

160. [redacted]

161. [redacted]

[redacted]

162. Each of these agreements shows that it is Apple that holds the power in the parties' relationship.

VI. Qualcomm Has Satisfied Its FRAND Commitments to ETSI with Respect to Apple.

163. From 2015 into 2017, Qualcomm and Apple engaged in negotiations about Apple taking a direct license to Qualcomm's cellular SEP portfolio. During that time, Qualcomm provided extensive information regarding the strength of its cellular SEP portfolio (as well as NEPs) and the applicability of Qualcomm's patents to Apple devices. Qualcomm also has made a complete, written license offer to Apple for Qualcomm's cellular SEP portfolio on FRAND terms. In response, Apple rejected Qualcomm's cellular SEP-only offer, accused Qualcomm of breaching its FRAND commitment, and proposed instead a much broader license to both Qualcomm's cellular SEPs *and* NEPs and offered to pay substantially less than the royalties that Qualcomm currently receives from the Contract Manufacturers. When Apple's offer is broken down to a per-device royalty using Apple's 2015 iPhone sales figures, it translates to a royalty of approximately [redacted] per device, while charging consumers as much as $970 (for the iPhone 7 Plus, 256GB).

164. Qualcomm fully satisfied its FRAND commitments to ETSI; Apple demonstrated that it is unwilling to negotiate in good faith for a license to Qualcomm's cellular SEPs.

A. Qualcomm Provided Extensive Information About Its Patent Portfolio.

165. In February 2016, Apple requested that Qualcomm provide to Apple, for each cellular SEP that Qualcomm believes is practiced by Apple products, (i) an "explanation as to why [Qualcomm] think[s] Apple's products infringe" that patent, (ii) "a specific royalty demand", and (iii) "the methodology [Qualcomm] used to arrive at the royalty rate sought".

166. Apple's request for patent-by-patent information is inconsistent with industry practice for negotiating portfolio licenses. Such information is also impossible to provide as a practical matter, which Apple well knows. In accordance with the ETSI IPR policy, Qualcomm has disclosed thousands of patents as potentially essential to one or more cellular standards. Demanding that Qualcomm provide detailed information for each and every patent practiced by Apple's products was, and is, entirely impractical. For those reasons, industry practice for major patent holders is to negotiate and license for a portfolio of patents while exchanging information concerning a representative set of the patents in the portfolio.

167. Nevertheless, Qualcomm did provide Apple with a wealth of information regarding Qualcomm's cellular SEP portfolio and its applicability to Apple devices. For example, Qualcomm provided nearly 2,000 pages of detail regarding its portfolio of patents disclosed to ETSI as potentially essential to 3G and 4G standards. Qualcomm also gave multiple presentations on the breadth, importance, strength, and value of Qualcomm's patent portfolio, both for cellular SEPs and other patents practiced by Apple's products. (By contrast, Apple provided no explanation of what value it attaches to its own patents, despite proposing a cross-license to Apple's cellular SEPs.)

168. Apple requested meetings to discuss representative claim charts demonstrating how specific patents are practiced by Apple devices. Qualcomm

was willing to provide and discuss that information, and proposed that the parties enter into an agreement that would enable the free exchange of this information without the threat that one party would use the information to commence litigation against the other. To that end, Qualcomm made a number of proposals. Qualcomm first proposed a limited non-use agreement—a common, reasonable condition on the exchange of sensitive business information such as claim charts. Apple rejected that option. Then the parties discussed a mutual standstill agreement. Apple expressed interest in the idea, and Qualcomm undertook the work to draft the proposed agreement. Apple then rejected that as well, refusing to offer edits or a counterproposal. As Apple's behavior demonstrates, Apple sought Qualcomm's business information for one reason and one reason only—to acquire information it could use in a complaint against Qualcomm, *not* to further the parties' licensing negotiations.

169. Notwithstanding Apple's tactics, Qualcomm did as Apple asked, providing a number of claim charts to Apple to demonstrate how specific patents are practiced by Apple devices. Qualcomm conducted several in-person meetings with Apple to review those claim charts. And Qualcomm was just getting started; it was prepared to continue with numerous meetings to present hundreds of additional claim charts. In fact, the parties already had scheduled another meeting to review additional claim charts, but Apple filed this lawsuit—including claims on certain of the claim charts that Apple insisted Qualcomm present—before the meeting could take place.

170. Apple's numerous attempts to impose the onerous requirement of patent-by-patent information as a condition of licensing demonstrate that Apple is an unwilling licensee and engaged in those requests only to delay negotiations and to posture for litigation.

B. Qualcomm Has Provided a Complete, Written Offer on FRAND Terms.

171. Over the summer of 2016, Qualcomm provided Apple with a complete, written offer, in two parts, for a license to Qualcomm's cellular SEPs. These written offers memorialized verbal offers that Qualcomm had provided to Apple months earlier. On June 15, 2016, Qualcomm offered Apple a license to Qualcomm's Chinese 3G and 4G cellular SEPs on the same terms agreed to by many Chinese cellular industry players in the last 18 months, and noted that an offer for the rest of Qualcomm's cellular SEPs would follow shortly. On July 15, 2016, as promised, Qualcomm provided Apple with an offer for a license covering Qualcomm's "rest of world" (*i.e.*, other than China) 3G and 4G cellular SEPs.

172. Qualcomm has made a complete, written offer for its cellular SEPs that complies with its contractual FRAND commitment in every respect.

173. The terms of Qualcomm's offer are based on the market-established value of Qualcomm's portfolio. The value is grounded in 25 years of market experience and hundreds of freely negotiated licenses to Qualcomm's portfolio currently in effect, many of which were recently negotiated with some of the largest and most sophisticated companies in the industry.

174. Consistent with industry practice, Qualcomm's offer calculates the royalty as a percentage of the net selling price ("NSP") of the entire device, subject to a per unit cap. When licensing its entire portfolio of SEPs and NEPs, Qualcomm (like other licensors in the industry) typically seeks royalties that are calculated as a percentage of the full NSP of a licensed product. But Apple initially requested a license only to cellular SEPs—*i.e.*, less than Qualcomm's full patent portfolio—so, in accordance with the [redacted]

175. Qualcomm has offered Apple a license to a portfolio of patents, not to individual patents, because as the industry (and Apple, when it serves its own interests) has long recognized, it would be practically impossible to conduct a patent-by-patent negotiation of hundreds or thousands of patents. Moreover, courts have recognized that portfolio-wide offers to large patent portfolios (such as Qualcomm's portfolio) are consistent with ETSI's IPR policy and that portfolio licensing has procompetitive benefits.

C. Apple's Response to Qualcomm Was Unreasonable.

176. Apple responded to Qualcomm's complete, written offer by accusing Qualcomm of breaching its FRAND commitment and by making an unreasonable counteroffer which rejected Qualcomm's offer.

177. Apple objected to Qualcomm's offer on the ground that the offer purportedly did not utilize the proper base for calculating a royalty. According to Apple, the proper base should be no more than a portion of the price of the baseband chipset, which Apple claims is the smallest salable patent-practicing unit ("SSPPU").

178. But this argument has no basis in law or industry practice. No court has held that a royalty voluntarily negotiated between parties for a portfolio license must be calculated as a percentage of an SSPPU value in order to comply with a contractual FRAND licensing commitment. In fact, the Federal Circuit has recognized that SSPPU is an evidentiary damages theory relevant to jury trials for individual patents asserted in patent infringement litigation, not a rule relevant to negotiations over a portfolio license in a commercial context.

179. ETSI's IPR policy does not require a patent holder to use the value of any SSPPU as the royalty base. Further, since the start of the cellular industry, the most widely accepted practice has been to charge patent royalties calculated as a percentage of the NSP of the entire device. And because of the range and diversity

of Qualcomm's SEP portfolio, and because the portfolio is comprised of patents largely directed at cellular communications systems, the appropriate SSPPU (if any) is the complete operational device.

180. Just as baseless was the royalty Apple counteroffered: [redacted]. When broken down to a per-iPhone royalty using Apple's 2015 sales figures, the proposed royalty would amount to less than [redacted] per device—a small fraction of the royalties Qualcomm currently receives from the Contract Manufacturers.

181. Apple's counteroffer is irreconcilable with its approach to valuing its own patents. As noted above, in its recent litigation with Samsung, Apple claimed that three Apple patents on user-interface features were worth $7.14 per phone. That is, Apple claims that thousands of Qualcomm patents on fundamental technologies that are essential to cellular communication—critical to the usefulness of the iPhone itself—pale in comparison to just three Apple patents on user-interface features.

182. As the parties' negotiating history makes clear, Apple is an unwilling licensee.

D. Qualcomm Offered to Arbitrate Any Dispute over Licensing Terms.

183. Recognizing that the negotiations ultimately might reach an impasse, and to avoid expensive and protracted litigation, Qualcomm also has sought to negotiate a framework to arbitrate some or all of the terms of a license agreement without constraints on how Qualcomm or Apple could argue its case.

184. Qualcomm first proposed arbitration several months before the licensing negotiations resumed in earnest. During the course of the negotiations, Qualcomm made a series of offers in an attempt to find a mutually agreeable arbitration framework. Qualcomm even offered to arbitrate under the arbitration procedures endorsed by the U.S. FTC in its consent order with Google in 2013.

Consistent with the U.S. FTC's framework, Qualcomm's proposal did not mandate any particular valuation methodology and permitted the parties to make whatever arguments they wished to the arbitral panel. By contrast, Apple wanted to place significant constraints on what arguments the parties could raise in arbitration.

185. Qualcomm was willing to arbitrate *any* license for *any* portfolio of patents in which Apple was interested, including the portfolio of patents for which Apple made a counteroffer.

186. But Apple refused every arbitration proposal and put forth an entirely one-sided, unreasonable proposal of its own. Apple's arbitration proposal, like its negotiating position, required a patent-by-patent analysis and imposed other unfair or unreasonable conditions that attempted to dictate how Qualcomm must present its patents, always in ways that favored Apple. Apple's repeated insistence on imposing unfair conditions on an arbitration, which it knew Qualcomm could not accept, demonstrates that Apple has been angling for litigation from the outset and is, in fact, an unwilling licensee.

VII. Apple Has Engaged in a Multifaceted Attack on Qualcomm's Business.

187. Apple has achieved unprecedented success in large part by using Qualcomm's innovative cellular technology. That technology was available to Apple over the past decade because Apple has operated under the Contract Manufacturers' licensing agreements with Qualcomm. Apple now seeks to stop paying fair value for Qualcomm's intellectual property despite having used that intellectual property to achieve its dominance and vast profits. To that end, Apple has attacked Qualcomm in an attempt to upend the contractual arrangements in place for the past decade. But, in doing so, Apple violated the law and its agreements with Qualcomm.

188. Among other conduct, (i) Apple induced regulatory investigations against Qualcomm's chipset business and licensing business around the world by,

among other things, encouraging investigations of Qualcomm, making false statements to regulators about Qualcomm, and advocating for worldwide penalties against Qualcomm; (ii) Apple has interfered with Qualcomm's agreements with the Contract Manufacturers by obstructing Qualcomm from performing audits of the Contract Manufacturers and blocking them from paying royalties owed to Qualcomm; (iii) Apple threatened Qualcomm to prevent it from promoting the performance of its own chipsets, and publicly denied the superior performance of iPhones with Qualcomm's chipsets; (iv) Apple withheld approximately [redacted] in chipset-related payments that Apple owes Qualcomm, which includes approximately [redacted] in payments that Apple has admitted it owes Qualcomm but refuses to pay unless Qualcomm drops its claim to the remaining amount owed; and (v) Apple [redacted]

A. Apple Actively Induced Investigations of Qualcomm.

189. Apple released Qualcomm from its payment obligations under the Cooperation Agreement by inciting and encouraging investigations by the KFTC, among other regulatory agencies. Specifically, Apple has actively induced regulatory investigations, which is conduct covered by Section 7 of the parties' Cooperation Agreement.

190. Among other things, (i) Apple induced government investigations of Qualcomm's chipset and licensing businesses; (ii) Apple knowingly made false statements to government agencies; and (iii) Apple urged the imposition of extraterritorial regulatory remedies against Qualcomm. In other words, Apple breached the peace—the "Cooperation Agreement"—that the parties had agreed to keep.

191. *Apple Induced Regulatory Action Against Qualcomm.* At a conference in Idaho during the summer of 2015, a top Apple executive encouraged Samsung to

"get aggressive" in asking the KFTC to continue to pursue Qualcomm, explaining that the KFTC investigation would be Samsung's "best chance" to try to force Qualcomm to change its licensing model.

192. Samsung is the largest "chaebol" (a Korean term for a massive, privately controlled business conglomerate) in Korea, accounting for about 20% of Korea's GDP and wielding extraordinary political power. Although they compete and have fought bitterly in many contexts, Apple and Samsung share a common interest in diminishing Qualcomm's ability to obtain fair value for its innovations. Apple and Samsung's inducement of regulatory action had nothing to do with the protection of competition. Instead, they saw an opportunity to try to avoid paying fair value for Qualcomm's intellectual property and to impede Qualcomm's licensing program—and they acted.

193. *Apple Made False and Misleading Statements to Government Agencies.* In a public KFTC hearing on August 17, 2016, Apple gave a lengthy presentation to the KFTC titled "[Apple's] Views on Qualcomm's Abuse of Dominance". In this presentation, Apple made a number of misstatements regarding Qualcomm's licensing practices and its business dealings with Apple that Apple knew were untrue.

194. For example, Apple's August 17, 2016 KFTC presentation states that "Apple has yet to add a [second chipset] supplier because of Qualcomm's exclusionary conduct".

195. Apple knew this statement was false. When Apple made that statement in August, it had already decided to incorporate Intel chipsets in the new iPhone and had already started sourcing those chipsets. In fact, Apple was mere *weeks* away from the September *release* of the iPhone 7, many of which use Intel baseband chipsets, including *all* iPhone 7s sold in Korea. Apple follows an exceptionally long launch timeline for its iPhones, [redacted]

[redacted] Thus, in August 2016, *one month* prior to launching the iPhone 7, Apple had already purchased (or caused contract manufacturers to purchase) large numbers of Intel chipsets for the iPhone.

196. Apple falsely asserted that it was not permitted to disclose publicly that it had added Intel as a supplier. But Apple's self-imposed confidentiality restriction does not excuse an affirmative misrepresentation to the KFTC specifically calculated to harm Qualcomm. Nor is there any reason why Apple could not have provided this information to the KFTC in a closed session. Further, the KFTC's request to Apple did not call for information about whether Apple had added another chipset supplier. Rather, Apple volunteered this false information. The only plausible explanation for Apple's conduct is that it intended to mislead the KFTC into believing that Qualcomm's conduct had an exclusionary effect, when it plainly did not.

197. Apple also told the KFTC that Qualcomm has never made a good faith offer for "an unbundled license for cellular SEPs only". Again, when Apple made this statement to the KFTC on August 17, 2016, Apple knew it was false. Just one month earlier, Qualcomm had provided Apple with a complete, written offer to license Qualcomm's cellular SEP portfolio.

198. Apple made additional misrepresentations in other submissions to the KFTC. Qualcomm has had extremely limited access to statements Apple made to the KFTC. For that reason, the full extent of Apple's involvement in the KFTC investigation has not yet been fully revealed.

199. Apple has also made untrue statements to other agencies around the world on topics such as Apple's license negotiations with Qualcomm and its consideration and use of Qualcomm's chipsets and other suppliers' chipsets. Qualcomm has had limited access (and in some case no access) to Apple's

submissions to other regulatory agencies as well. For that reason, the full extent of Apple's involvement in other investigations has not yet been fully revealed.

200. By misleading regulators, Apple released Qualcomm from its payment obligations under the parties' Cooperation Agreement. Apple initially claimed that its right to respond to regulators and collect payments under the Cooperation Agreement was "unconditional"—arguing that it could say anything to agencies about Qualcomm, "truthful or not", and still demand Cooperation Agreement payments. Apple later conceded, as it had to, that the Cooperation Agreement's protection for responses to regulatory inquiries is limited to truthful statements. However, in its Complaint, Apple reversed itself again and reasserts the untenable position that it can make false or misleading statements to regulators with impunity and still be entitled to payments from Qualcomm under the Cooperation Agreement. False statements are, by their very nature, not responsive to a government inquiry. An untrue statement hinders, rather than facilitates, an agency's investigation.

201. *Apple's "Extortion" Allegations Against Qualcomm Are Made in Bad Faith.* As the parties engaged in discussions that Qualcomm thought were an attempt to resolve the Cooperation Agreement dispute, Apple asked Qualcomm to propose ways in which Apple could address Qualcomm's concerns, including proposing clarifying statements that Apple could make to the KFTC to rectify the situation. In a meeting in late 2016 between certain Qualcomm and Apple high-level executives, an Apple executive first suggested that Qualcomm consider whether Apple (even if it disagreed with Qualcomm's position) could resolve the dispute by making remedial statements to the KFTC.

202. In response, Qualcomm proposed specific remedial steps Apple could take to cure its conduct, including identifying specific examples of Apple's untrue and misleading statements and providing the correct information relating to those

statements. Apple summarily rejected the proposal it had requested from Qualcomm.

203. Apple's invitation to Qualcomm to propose remedies is an example of Apple exploiting Qualcomm's good faith efforts to negotiate. In its Complaint, Apple repeatedly portrays Qualcomm's *response to Apple's request* as an attempt by Qualcomm to "extort" Apple. That is plainly not true. What has become clear is that Apple baited Qualcomm by asking Qualcomm to propose possible remedies precisely so that Apple could later accuse Qualcomm of "extortion" in a lawsuit it was already preparing to file.

204. Contrary to what Apple has alleged, as correspondence reveals, Qualcomm has not tried to "gag" or "censor" Apple. Apple was and is free to communicate with regulators. Qualcomm is in no way impeding Apple from providing *truthful* information sought by agencies, regardless of whether that information is critical of Qualcomm. Qualcomm, of course, cannot prevent Apple from making *untrue* statements to agencies. But such conduct had contractual consequences—namely, it released Qualcomm from the obligation to make Cooperation Agreement payments.

205. *Apple Induced the KFTC To Impose Extraterritorial, Worldwide Remedies Against Qualcomm.* Apple also urged the KFTC to impose remedies against Qualcomm around the world—outside of Korea. Specifically, Apple pleaded with the KFTC that its "relief should not be limited to purchases or sales only in Korea", arguing that this would "[p]rotect Korean [c]onsumers" and "restore competition". In other words, Apple urged the KFTC to regulate Qualcomm's licensing conduct in every country in the world, regardless of (i) those countries' respective intellectual property and competition laws, (ii) Qualcomm's due process rights in these jurisdictions, and (iii) whether the conduct had any effect on Korea or Korean customers. This inducement of plainly extraterritorial, worldwide regulatory remedies extinguished Qualcomm's payment obligations

under the Cooperation Agreement. Inducing the KFTC to order Qualcomm to modify its licensing practices in other countries is no different from Apple actively inducing investigation or litigation in those countries.

206. By inducing governmental investigations, providing false and misleading information to the agencies, and seeking extraterritorial, worldwide remedies against Qualcomm, Apple directly denied Qualcomm the benefit of the Cooperation Agreement. Apple also breached the covenant of good faith and fair dealing implied in the Cooperation Agreement.

B. Apple Interfered with Qualcomm's Agreements with the Contract Manufacturers.

207. The Contract Manufacturers' license agreements were entered into on terms consistent with others in the industry, without Apple's involvement. In an effort to impose its own terms on Qualcomm, Apple has tortiously interfered with Qualcomm's contracts with the Contract Manufacturers.

208. Apple prevented, restricted, and discouraged the Contract Manufacturers from complying fully with the terms of their license agreements, which is prohibited by the Cooperation Agreement.

209. Accordingly, Apple (i) violated its obligations under Section 4 of the parties' Cooperation Agreement and extinguished Qualcomm's payment obligations under Section 7, and (ii) tortiously interfered with Qualcomm's contractual relationship with the Contract Manufacturers.

210. *Audit Interference.* Apple has tortiously interfered with each of the Contract Manufacturers' license agreements by forcing the Contract Manufacturers to block Qualcomm from exercising its right to audit the Contract Manufacturers.

211. Qualcomm has the right to audit each of the Contract Manufacturers to confirm that they are fully paying the royalties they owe Qualcomm under their respective licenses agreements. The audits are conducted by independent royalty auditors who enter into non-disclosure agreements with the Contract

Manufacturers, ensuring that no confidential information belonging to the Contract Manufacturers or any of their customers will be provided to Qualcomm. The audit is supposed to cover books and records concerning any devices the Contract Manufacturers sell, including documents evidencing the number of devices sold and the consideration charged by the Contract Manufacturer for such sales.

212. Apple has routinely obstructed these audits by prohibiting the Contract Manufacturers from providing the independent royalty auditors with even basic information about units sold to Apple. [redacted]

213. [redacted] Apple is seeking to obtain the benefits of relying on the Foxconn license agreement while at the same time interfering with Qualcomm's rights under that agreement.

214. [redacted]

215. Due to Apple's interference, Qualcomm is unable to exercise its audit rights to determine whether it is receiving all the royalties that the Contract Manufacturers owe Qualcomm on Apple products.

216. *Interference with Contract Manufacturers' Royalty Payments.* Apple also actively and intentionally interfered with the Contract Manufacturers' payment obligations to Qualcomm, causing certain Contract Manufacturers to withhold royalties they owe Qualcomm. In so doing, Apple violated Section 4 of the Cooperation Agreement, and tortiously interfered with Qualcomm's agreements with the Contract Manufacturers.

217. Although Apple is obliged to reimburse the Contract Manufacturers for their royalty payments to Qualcomm, at some point in 2016, Apple began refusing to reimburse the Contract Manufacturers for most of the amounts owed to Qualcomm as royalties on devices sold to Apple.

218. Apple did this for the direct purpose, and with the effect, of causing those manufacturers to breach their own agreements with Qualcomm and by failing to make required royalty payments on devices sold to Apple.

219. For example, in late January 2017, Foxconn provided Qualcomm with the iPhone royalty report for Q4 2016. The report specified a nearly [redacted] royalty due, but Foxconn requested that the invoice be issued for approximately [redacted] of that amount because that was the "approval amount" from its customer—Apple.

220. Apple acknowledges as much in its Complaint, stating that it has withheld an amount representing royalties owed to Qualcomm from the Contract Manufacturers. Foxconn confirmed this was the case, informing Qualcomm that [redacted]

221. Further confirming its interference, Apple informed Qualcomm in writing that it is withholding royalty reimbursement payments from certain Contract Manufacturers, payments of virtually the same amount as the Contract Manufacturers have asked Qualcomm to carve out from their invoices and withheld from their payments to Qualcomm. [redacted]

[redacted]

C. Apple Misrepresented the Performance of Qualcomm-Based iPhones and Threatened Qualcomm Not To Disclose the Truth.

222. Apple deliberately chose not to utilize certain speed-increasing features of Qualcomm's chipsets in the iPhone 7 in an effort to match the slower speeds of Intel's chipsets in other models of the iPhone 7. Apple used threats to prevent Qualcomm from making public comparisons of (i) the performance of the Qualcomm-based iPhones and Intel-based iPhones, or (ii) the performance of the Qualcomm chipsets in Qualcomm-based competitive devices and those in iPhones. Having rejected Qualcomm's chipset enhancements and prevented Qualcomm from making public comparisons, Apple asserted, publicly and falsely, that there was "no discernible difference" between iPhones with Intel chipsets and those with Qualcomm chipsets.

223. *Apple Chose Not to Utilize the Full Power of Qualcomm's Chipsets.* On September 16, 2016, Apple released some iPhone 7 models with Qualcomm chipsets on select networks, whereas other models of the iPhone 7 were released on other networks using Intel chipsets.

224. Prior to the iPhone 7 launch, it had been five years since Apple launched a new generation of the iPhone that used an Infineon or Intel chipset. From 2011 until the fall of 2016, Qualcomm was Apple's only cellular chipset supplier for new (*i.e.*, non-legacy) iPhones. Apple used only Qualcomm's chipsets for five years because, among other reasons, Qualcomm's chipsets were better than the competition, such as Intel, and Qualcomm's chipsets (unlike its competitors) were able to meet Apple's rigid schedule demands. That has not changed—Qualcomm's chipsets are still better than the competition.

225. The Qualcomm chipset used in the iPhone 7, which relies on Qualcomm's X12 modem, is capable of downloading data at speeds up to 600 megabits per second. By contrast, the modems in Intel's chipsets are capable of downloading data at speeds of only 450 megabits per second.

226. To create artificial parity between the Qualcomm-based iPhone 7 and the Intel-based iPhone 7, Apple decided not to use certain capabilities of the Qualcomm chipset for the Qualcomm-based iPhone 7, so that they would run at speeds closer to those of the inferior Intel-based iPhone 7. For example, Apple decided not to use Qualcomm software that increases download rates, even though that technology is enabled by other commercial devices launched in 2016, such as the Samsung Galaxy S7.

227. Apple's decision not to use certain enhanced features of Qualcomm's chipset prevented a more capable version of the iPhone 7 from reaching the market. In addition, Apple's decision potentially could impede efficiency of other users on the entire network. The inefficient allocation of bandwidth to iPhones has a potential ripple effect across a whole network.

228. *Apple Concealed the Superiority of the Qualcomm-Based iPhone 7 and Threatened Qualcomm Not to Disclose It.* Apple made clear to Qualcomm that if Qualcomm disclosed the iPhone's chipset speed disparity to the public, it would jeopardize Qualcomm's business and prospects of supplying any chipsets to Apple in the future. On an August 2016 phone call, an Apple executive told a Qualcomm executive that Apple would use its marketing organization to retaliate against Qualcomm if Qualcomm publicly compared the performance of Qualcomm-based iPhones to Intel-based iPhones. Apple's executive also warned that such a comparison would severely impact Qualcomm's standing as a supplier to Apple.

229. *Apple Publicly Denied the iPhone Performance Disparity.* By choosing not to take advantage of speed-increasing features in Qualcomm's chipsets, Apple tried to ensure that iPhones using Qualcomm chipsets were as slow

as iPhones using Intel chipsets. But when the iPhone 7 was launched on September 16, 2016, the Qualcomm-based iPhones were still outperforming the Intel-based iPhones.

230. Within weeks of the iPhone 7's launch, independent studies showed "huge performance differences between Intel and Qualcomm versions of [the] iPhone 7". (Forbes, Aaron Tilley, Oct. 20, 2016.) As a specific example, LTE connectivity studies conducted by Cellular Insights revealed that Qualcomm modems outperformed Intel modems by 30% overall and by 75% when the cellular signal is weakest. Again, this was after Apple had chosen not to use the more advanced features of the Qualcomm chipsets.

231. Analyst reports also made clear that, even though iPhones using Qualcomm chipsets were outperforming iPhones using Intel chipsets, the Qualcomm-based iPhones had the potential to perform even faster. In other words, but for Apple's choice to deprive consumers of speed and value, the performance gap between iPhones using Qualcomm chipsets and iPhones using Intel chipsets would have been even wider. For example, Bloomberg reported that the Verizon version of the iPhone 7 using Qualcomm's chipset was faster than its AT&T version of the iPhone 7 using Intel's chipset, but *still* "*not as fast as it could be*". (Ian King and Scott Moritz. Bloomberg. "Apple's Chip Choices May Leave Some iPhone Users in Slow Lane", November 18, 2016, available at: https://www.bloomberg.com/news/articles/2016-11-18/apple-chip-choices-may-leave-some-iphone-users-in-slow-lane.)

232. The impact of Apple's choice not to use enhancements of the Qualcomm chipset for Qualcomm-based iPhones was further reflected by studies comparing iPhones with non-Apple phones that used the same Qualcomm modem. For instance, based on comparisons between the Qualcomm-based iPhone 7 and a Qualcomm-based Samsung Galaxy S7 (which used the same Qualcomm X12 modem as the Verizon iPhone 7), Bloomberg reported that "[t]he S7 was about

twice as fast as the iPhone 7 running on the same network with the same modem chip." Other studies even indicated that Apple's Intel-based iPhone 7 operates with slower modem performance than the Qualcomm-based, prior generation iPhone 6S.

233. Apple publicly denied the findings of these independent studies, harming consumers in the process. For example, in response to reports suggesting that (i) Apple had chosen not to enhance the speeds of iPhones using Qualcomm chipsets, and (ii) the iPhones using Qualcomm chipsets were still outperforming the iPhones using Intel chipsets, an Apple spokesperson falsely claimed that there was no difference between the Qualcomm-based iPhones and the Intel-based iPhones. The spokesperson told Bloomberg: "In all of our rigorous lab tests based on wireless industry standards, in thousands of hours of real-world field testing, and in extensive carrier partner testing, the data shows *there is no discernible difference* in the wireless performance of any of the models." Apple publicly claimed that there was "no discernible difference" between iPhones using Intel chipsets and iPhones using Qualcomm chipsets when it knew the opposite to be true.

234. Apple's comment that there was "no discernible difference" was designed to rebut the findings of these third-party studies and to imply, falsely, that Qualcomm's chipsets and Intel's chipsets were indistinguishable.

235. *Apple's Misstatements About the Relative Performance of the Qualcomm Versus Intel Modems in iPhone 7 and Its Threat Have Harmed Qualcomm and Consumers.* Absent Apple's conduct, Qualcomm's chipsets would be in higher demand, and Qualcomm would be able to sell more chips to Apple to meet that demand. Apple's decision not to use Qualcomm's enhanced chipsets denied consumers access to higher-performing devices, and Apple's threats and other efforts to hide the truth deprived consumers of meaningful choice. And, as noted above, by choosing not to utilize the higher data rates that Qualcomm's chipsets can reach for the Qualcomm-based iPhones, Apple reduces the data download resources available to *other* smartphones operating on the network.

236. By choosing not to use the best performing Qualcomm-based iPhones (and risking that consumers would find out), Apple faced a potential backlash from its customers. It avoided that backlash by concealing the truth, at the expense of Qualcomm and consumers alike.

D. Apple Is Withholding Approximately [redacted] in Chipset Payments That It Owes Qualcomm.

237. Apple has refused to pay approximately [redacted] that it owes Qualcomm for an LTE chipset feature related to "carrier aggregation" (or "CA") in certain chipsets. The carrier aggregation feature enables smartphones operating on LTE networks to send and receive data at much faster rates than they otherwise could. Apple itself has said that this feature allows the iPhone to run "faster than ever". But Apple refuses to honor its contractual commitment to pay Qualcomm for the carrier aggregation feature in the chipsets and related software it designed for Apple.

238. In Apple and Qualcomm's Statement of Work, dated February 28, 2013, as amended (the "2013 SOW"), Apple promised to pay Qualcomm a set rate, called an [redacted] for Apple products that included Qualcomm's MDM9625 chipset[3] and met any one of the four criteria under Section 4.2, enumerated below:

[redacted]

[3] The MDM9625 chipset was included in certain models of the iPhone and the iPad that Apple launched in 2014 and 2015.

[redacted]

239. Apple has *admitted* that it owes Qualcomm approximately [redacted] relating to carrier aggregation, but it has refused to pay even that amount. In fact, Apple owes Qualcomm substantially more.

240. [redacted] For example, one of the events in question took place at Apple's iPhone 6 and iPhone 6 Plus (together, the "iPhone 6") launch event—a major press event. As Apple put it, "It's not just another day in Cupertino." September 9, 2014 was "an important day in Apple's history." Following the opening remarks, Apple's Senior Vice President of Worldwide Marketing, Phil Schiller, took the stage to "*tell the world about iPhone 6*." One of the differentiating features of the iPhone 6 that Mr. Schiller touted was carrier aggregation. He stated:

> "There's new advanced wireless capabilities. The LTE in iPhone 6 and 6 Plus is faster than ever, 150 Mb per second as compared to 100 in the previous products. It does that with a technology called carrier aggregation and there is now 20 LTE bands compared to 13 previously. That's the most in any smartphone in the world. It means we are working now with over 200 carriers around the world to support LTE on iPhone 6."

241. Media coverage of the launch event included Mr. Schiller's promotion of the iPhone 6's carrier aggregation capability. For example, one publication reported that "Apple is boasting the implementation of a new technology called 'carrier aggregation' to boost your wireless LTE speeds." Michael Learmonth, *Apple's New iPhones: Everything You Need To Know About iPhone 6, iPhone 6*

Plus, International Business Times (Sept. 9, 2014), http://www.ibtimes.com/apples-new-iphones-everything-you-need-know-about-iphone-6-iphone-6-plus-1682936.

242. [redacted], Apple similarly advertised the carrier aggregation feature for its iPads containing Qualcomm's MDM9625 chipset. At the October 16, 2014 launch event for the iPad Air 2 (another "Apple Special Event"), Mr. Schiller stated that the device has "faster LTE with more bands. It has up to 150 Mb per second—***that's using carrier aggregation***. And it has 20 LTE bands. That's more than any other tablet. So it connects at high LTE speeds on more networks around the world." [redacted]

243. [redacted]

244. [redacted]

245. [redacted]

246. [redacted]

247. [redacted]

248. [redacted]

E. Apple Materially Breached the Master Software Agreement.

249. Apple has materially breached the MSA [redacted]

250. [redacted]

251. [redacted]

252. [redacted]

Qualcomm provides Apple with its software, which is then loaded onto an iPhone or iPad (by the Contract Manufacturers); [redacted]

253. [redacted]

COUNT I

Tortious Interference with Qualcomm's License Agreements with the Contract Manufacturers

254. Qualcomm restates, re-alleges, and incorporates by reference each of the allegations set forth above as if fully set forth herein.

255. Qualcomm's license agreements with Foxconn, Pegatron, Wistron, and Compal are valid, enforceable and binding agreements.

256. Qualcomm entered into a license agreement with Compal on February 10, 2000. The parties have executed six amendments to the license agreement.

257. Qualcomm entered into a license agreement with Foxconn on October 18, 2005. The parties have executed four amendments to the license agreement.

258. Qualcomm entered into a license agreement with Wistron on May 23, 2007. The parties have executed one amendment to the license agreement.

259. Qualcomm entered into a license agreement with Pegatron on April 29, 2010. The parties have executed four amendments to the license agreement.

260. Each license agreement and amendment is the result of arm's-length negotiation by sophisticated parties.

261. At all relevant times, Apple has been aware of Qualcomm's license agreements with each Contract Manufacturer.

262. Apple has intentionally interfered with, and continues to intentionally interfere with, Qualcomm's license agreements with Foxconn, Pegatron, and Wistron, by purposefully inducing these Contract Manufacturers not to pay royalties due to Qualcomm under the license agreements.

263. Two weeks after Apple filed its Complaint, a senior Apple executive confirmed that Apple had interfered in the Contract Manufacturers' license agreements with Qualcomm. On February 3, 2017, in a letter sent on behalf of Apple, [redacted]

264. Specifically, in the February 3 letter, Apple admitted to Qualcomm that [redacted]

265. Apple knew that by withholding these payments Apple would cause the Contract Manufacturers to stop paying royalties to Qualcomm, in breach of their respective license agreements. And in its Complaint, Apple explicitly acknowledged its intent to withhold payments from the Contract Manufacturers, "which are Qualcomm licensees".

266. Apple specifically intended that the Contract Manufacturers would withhold payments and motivated them to do so [redacted]

267. As a result of Apple's interference, certain Contract Manufacturers have reduced their royalty payments to Qualcomm. For the fourth quarter of 2016, Foxconn withheld more than [redacted] in royalties that it owes to Qualcomm, which it did as a direct result of Apple's interference.

268. For the fourth quarter of 2016, Pegatron withheld more than [redacted] in royalties that it owes to Qualcomm, which it did as a direct result of Apple's interference.

269. For the fourth quarter of 2016, Wistron also failed to pay royalties it owed Qualcomm, an action that occurred as a direct result of Apple's interference.

270. In addition, Apple has tortiously interfered with, and continues to tortiously interfere with, the Contract Manufacturers' license agreements by intentionally obstructing Qualcomm's right to audit the Contract Manufacturers. Apple has prohibited the Contract Manufacturers from fully complying with independent royalty auditors, which Apple was and is certain or substantially certain would result in the obstruction of Qualcomm's audit rights. As a result, Qualcomm has been and will continue to be unable to close a number of such audits. Qualcomm's repeated attempts to resolve these outstanding audits have been unsuccessful.

271. Independent royalty auditors attempt to conduct audits of each of the Contract Manufacturers every two years. Since each Contract Manufacturer began producing Apple products, independent royalty auditors have conducted (or attempted to conduct) multiple audits of the Contract Manufacturers. Because Apple has instructed the Contract Manufacturers not to comply fully with independent royalty auditors as required under their license agreements, Qualcomm has been unable to close multiple audits, including the most recent audit of each Contract Manufacturer. Every day that Apple prevents Qualcomm from closing these audits or otherwise interferes with Qualcomm's audit rights, Apple is tortiously interfering with Qualcomm's business relationships with the Contract Manufacturers.

272. By interfering with Qualcomm's contractual right to audit the Contract Manufacturers, Apple has caused, and continues to cause, the Contract Manufacturers to breach their license agreements and has significantly disrupted and continues to significantly disrupt Qualcomm's ability to conduct its business with the Contract Manufacturers.

273. Apple has also directed the Contract Manufacturers to [redacted] Apple's interference with the Contract Manufacturers' payment obligations has significantly disrupted Qualcomm's ability to conduct its business with the Contract Manufacturers.

274. Apple's actions were, and continue to be, intentionally malicious and oppressive toward Qualcomm. Not only does Apple intend to injure Qualcomm's economic interests and its relationships with the Contract Manufacturers, but Apple has consciously and repeatedly disregarded Qualcomm's independent business relationships with the Contract Manufacturers, and continues to do so.

275. Qualcomm has been damaged, and continues to be damaged by, Apple's tortious interference with the Contract Manufacturers' payment of royalties, their calculation of royalties, and their compliance with Qualcomm's audits.

276. Accordingly, Qualcomm is entitled to its economic damages, punitive damages, attorneys' fees, and injunctive relief necessary to prevent future threatened injury (including loss of profits, loss of customers and potential customers, loss of goodwill and product image, and loss of business relationships) and to prevent a multiplicity of judicial proceedings.

COUNT II

Declaration That Qualcomm's License Agreements with the Contract Manufacturers Do Not Violate Qualcomm's FRAND Commitments to ETSI

277. Qualcomm restates, re-alleges, and incorporates by reference each of the allegations set forth above as if fully set forth herein.

278. An actual controversy has arisen and now exists between Qualcomm and Apple, which have adverse legal interests, regarding whether Qualcomm's license agreements with the Contract Manufacturers violate Qualcomm's FRAND commitments to ETSI. There is a case or controversy of sufficient immediacy, reality, and ripeness to warrant the issuance of a declaratory judgment.

279. Qualcomm entered into a license agreement with Compal on February 10, 2000. The parties have executed six amendments to the license agreement.

280. Qualcomm entered into a license agreement with Foxconn on October 18, 2005. The parties have executed four amendments to the license agreement.

281. Qualcomm entered into a license agreement with Wistron on May 23, 2007. The parties have executed one amendment to the license agreement.

282. Qualcomm entered into a license agreement with Pegatron on April 29, 2010. The parties have executed four amendments to the license agreement.

283. Each license agreement and amendment is the result of arm's-length negotiation by two sophisticated parties.

284. Each of the Contract Manufacturers chose to sign an agreement with Qualcomm that grants it rights to various categories of Qualcomm's intellectual property, including broad licenses to Qualcomm's portfolio of patents.

285. Each of the Contract Manufacturers' license agreements grants rights to practice Qualcomm's cellular SEPs for the specified standards at any time during the term of the agreement, plus many other patents and applications owned by Qualcomm as of an agreed-upon date. [redacted] Each of the license agreements grants a license to thousands of Qualcomm's SEPs and NEPs.

286. The royalties for devices under each of the Contract Manufacturers' license agreements are calculated as a percentage of the net selling price of the entire device sold by the Contract Manufacturer.

287. Each of the Contract Manufacturers' license agreements is consistent with the license agreements Qualcomm has entered into with many other companies on broadly similar terms.

288. Each Contract Manufacturer began paying Qualcomm royalties under the terms of its license agreement for non-Apple products before paying royalties for Apple products.

289. Until recently, each of the Contract Manufacturers had consistently paid Qualcomm royalties under its license agreement for manufacturing both non-Apple products and Apple products, *regardless of whether those products also used Qualcomm's components or software*.

290. This course of conduct and the allegations set forth above show that Qualcomm's license agreements with the Contract Manufacturers are consistent with ETSI's IPR policy.

291. Qualcomm seeks a declaratory judgment that Qualcomm's license agreements with Compal, Foxconn, Wistron, and Pegatron do not violate Qualcomm's FRAND commitments to ETSI.

COUNT III

Declaration That Qualcomm's License Agreements with the Contract Manufacturers Do Not Violate Competition Law

292. Qualcomm restates, re-alleges, and incorporates by reference each of the allegations set forth above as if fully set forth herein.

293. Apple has failed to plead viable Sherman Act and California Business and Professions Code claims.

294. An actual controversy has arisen and now exists between Qualcomm and Apple, which have adverse legal interests, regarding whether Qualcomm's license agreements with the Contract Manufacturers are lawful and abide by Section 2 of the Sherman Act, 15 U.S.C. § 2, and California Business and Professions Code § 17200. As Apple's lawsuit demonstrates, there is a case or controversy of sufficient immediacy, reality, and ripeness to warrant the issuance of a declaratory judgment.

295. Qualcomm entered into a license agreement with Compal on February 10, 2000. The parties have executed six amendments to the license agreement.

296. Qualcomm entered into a license agreement with Foxconn on October 18, 2005. The parties have executed four amendments to the license agreement.

297. Qualcomm entered into a license agreement with Wistron on May 23, 2007. The parties have executed one amendment to the license agreement.

298. Qualcomm entered into a license agreement with Pegatron on April 29, 2010. The parties have executed four amendments to the license agreement.

299. Each of the Contract Manufacturers chose to sign an agreement with Qualcomm that grants it rights to various categories of Qualcomm's intellectual property, including broad licenses to Qualcomm's portfolio of patents.

300. Each of the Contract Manufacturers' license agreements grants rights to practice Qualcomm's cellular SEPs for the specified standards at any time during the term of the agreement, plus many other patents and applications owned by Qualcomm as of an agreed-upon date. [redacted] Each of the license agreements grants a license to thousands of Qualcomm's SEPs and NEPs.

301. The royalties for devices under each of the Contract Manufacturers' license agreements are calculated as a percentage of the net selling price of the entire device sold by the Contract Manufacturer.

302. Each of the Contract Manufacturers' license agreements is consistent with the license agreements Qualcomm has entered into with many other companies on broadly similar terms.

303. Each of Qualcomm's license agreements with the Contract Manufacturers was entered into before Apple ever used a single Qualcomm chipset in its products. The terms of the Contract Manufacturers license agreements with Qualcomm have never depended on whether Apple used Qualcomm or non-Qualcomm chipsets in its iPhones.

304. Each Contract Manufacturer began paying Qualcomm royalties under the terms of its license agreement for non-Apple products before paying royalties for Apple products. Until recently, each of the Contract Manufacturers had consistently paid Qualcomm royalties under its license agreement for manufacturing both non-Apple products and Apple products, *regardless of whether those products also used Qualcomm's components or software*.

305. This course of conduct and the allegations set forth above show that Qualcomm's license agreements with the Contract Manufacturers are consistent with the Sherman Act and the California Business and Professions Code.

306. Qualcomm seeks a declaratory judgment that Qualcomm's license agreements with Compal, Foxconn, Wistron, and Pegatron do not violate Section 2 of the Sherman Act, 15 U.S.C. § 2, and California Business and Professions Code § 17200.

COUNT IV

Declaration That Qualcomm Has Satisfied Its FRAND Commitments to ETSI with Respect to Apple

307. Qualcomm restates, re-alleges, and incorporates by reference each of the allegations set forth above as if fully set forth herein.

308. An actual controversy has arisen and now exists between Qualcomm and Apple, which have adverse legal interests, regarding whether Qualcomm has satisfied its FRAND commitments during its licensing negotiations with Apple. There is a case or controversy of sufficient immediacy, reality, and ripeness to warrant the issuance of a declaratory judgment.

309. From 2015 into 2017, Qualcomm and Apple engaged in negotiations about Apple's taking a direct license to Qualcomm's cellular SEP portfolio.

310. At Apple's request, Qualcomm provided extensive information regarding the strength of its cellular SEP portfolio (as well as NEPs) and the applicability of Qualcomm's patents to Apple's devices.

311. At Apple's request, Qualcomm has made a complete, written license offer to Apple for Qualcomm's cellular SEP portfolio on FRAND terms.

312. On June 15, 2016, Qualcomm offered to license Qualcomm's Chinese 3G and 4G cellular SEPs on the same terms agreed to by many Chinese cellular industry players in the last 18 months, and noted that an offer for the rest of Qualcomm's cellular SEPs would follow shortly.

313. On July 15, 2016, as promised, Qualcomm provided Apple with an offer for a license covering Qualcomm's "rest of world" (*i.e.*, other than China) 3G and 4G cellular SEPs.

314. In response, Apple rejected Qualcomm's cellular SEP-only offer, accused Qualcomm of breaching its FRAND commitment, and proposed instead unreasonable terms with respect to a license for a portfolio of SEPs *and* NEPs, insisting on paying substantially less than the royalties Qualcomm currently receives from the Contract Manufacturers.

315. From the outset of the parties' licensing negotiations, Qualcomm tried to negotiate a framework to arbitrate some or all of the terms of a license agreement.

316. Qualcomm first proposed arbitration several months before the licensing negotiations began in earnest and then made a series of offers in an attempt to find a mutually agreeable arbitration framework. Qualcomm even offered to arbitrate under the arbitration procedures endorsed by the U.S. FTC in its consent order with Google in 2013.

317. Qualcomm was willing to arbitrate *any* license for *any* portfolio of patents in which Apple was interested, including the portfolio of patents for which Apple made a counteroffer.

318. Apple refused each of Qualcomm's arbitration proposals. Instead, Apple put forth an unreasonable proposal of its own. Apple's arbitration proposal sought to impose unreasonable and unfair conditions on Qualcomm.

319. Apple's insistence on imposing unreasonable and unfair conditions on an arbitration process demonstrates Apple's preference from the outset for patent-by-patent litigation. Apple's behavior shows that Apple was never interested in entering into a direct cellular SEP license with Qualcomm on FRAND terms.

320. While Qualcomm complied with its FRAND commitments, Apple demonstrated itself to be an unwilling licensee.

321. Qualcomm, therefore, seeks a declaratory judgment that it has satisfied its FRAND commitments during its negotiations with Apple.

COUNT V

Breach of the Statement of Work, dated February 28, 2013

322. Qualcomm restates, re-alleges, and incorporates by reference each of the allegations set forth above as if fully set forth herein.

323. The Statement of Work between Qualcomm and Apple, dated February 28, 2013, as amended, (the "2013 SOW"), constitutes a valid and enforceable agreement between the parties.

324. Qualcomm has performed all of its obligations under the 2013 SOW, whereas Apple has breached at least Section 4.2 of the 2013 SOW.

325. On February 10, 2017, Qualcomm notified Apple that it was invoking the 2013 SOW's dispute resolution procedures, outlined in Attachment 2 of the ASTA, due to Apple's breach of Section 4.2 of the 2013 SOW. The parties engaged in certain discussions under the terms of the ASTA's dispute resolution process.

326. Pursuant to Section 4.2, Apple promised to pay Qualcomm a set rate, called an [redacted], for Apple products that included Qualcomm's MDM9625 chipset and met any one of the following four criteria:

[redacted]

[redacted]

327. Apple is refusing to honor its commitment to make carrier aggregation payments under at least Section 4.2(A) and Section 4.2(D).

328. Apple admits that it owes Qualcomm approximately [redacted] pursuant to Section 4.2 of the 2013 SOW. But Apple has refused to pay even that amount in an attempt to force Qualcomm to give up its rights to the rest of the money Apple owes.

329. In total, Apple is withholding approximately [redacted] in payments it owes Qualcomm.

330. Qualcomm has been damaged by Apple's breach of the 2013 SOW in an amount to be proven at trial.

COUNT VI

Breach of the Business Cooperation and Patent Agreement

331. Qualcomm restates, re-alleges, and incorporates by reference each of the allegations set forth above as if fully set forth herein.

332. The Cooperation Agreement between Qualcomm and Apple constitutes a valid and enforceable agreement between the parties.

333. Qualcomm has performed all of its obligations under the Cooperation Agreement.

334. On October 9, 2016, Qualcomm notified Apple that it was invoking the Cooperation Agreement's dispute resolution procedures, and that it would not make any further Cooperation Agreement payments to Apple. The parties engaged in escalation discussions pursuant to the terms of the Cooperation Agreement's dispute resolution process.

335. *Breach of Section 7 of the Cooperation Agreement*

a. [redacted]

b. [redacted]

c. Apple breached Section 7 of the Cooperation Agreement by accepting payments from Qualcomm, fully aware that Apple had not fulfilled the necessary conditions under Section 7 to be entitled to such payments.

d. Apple has been waging a worldwide campaign against Qualcomm with the goal of causing regulatory agencies to pursue investigations that would harm Qualcomm and benefit Apple. Qualcomm became aware of specific Apple conduct that constitutes active inducement under the Cooperation Agreement. For example: (i) Apple induced Samsung to suggest to the KFTC that it should broaden its investigation into Qualcomm; (ii) Apple made untrue statements to the KFTC and other government agencies about Qualcomm; and

(iii) Apple urged the KFTC to impose extraterritorial, worldwide remedies against Qualcomm. Apple has engaged in similar conduct with other regulatory agencies.

e. These investigations concern Qualcomm's licensing business and its component and software supply businesses. For example, the KFTC investigated both (i) whether Qualcomm offered a license on FRAND terms and conditions, and (ii) Qualcomm's chipset business.

f. Because Qualcomm only recently became aware of the extent of Apple's campaign against Qualcomm, Qualcomm has made payments to Apple under the Cooperation Agreement, unaware that Apple had failed to satisfy the necessary conditions to be entitled to such payments. Apple accepted such payments, despite knowing that it had failed to meet the necessary conditions for payment under Section 7.

g. Apple breached the Cooperation Agreement by accepting hundreds of millions of dollars in payments to which it was not entitled under the terms of Section 7.

336. *Breach of Section 4 of the Cooperation Agreement*

a. [redacted]

b. Apple has breached Section 4 of the Cooperation Agreement by, for example, (i) deliberately inducing the Contract Manufacturers to reduce royalty payments to Qualcomm, (ii) interfering with the audit procedures provided for in the license agreements between the Contract Manufacturers and Qualcomm, and (iii) directing the Contract Manufacturers to misstate or manipulate the net selling price of the devices they sell to Apple.

c. Section 4 bars Apple from knowingly taking any action that prevents, restricts, or discourages the Contract Manufacturers from complying fully with the terms of their agreements with Qualcomm.

d. Apple breached Section 4 by discouraging the Contract Manufacturers from making full royalty payments to Qualcomm, as required under their agreements with Qualcomm.

e. Apple also breached Section 4 by interfering with the independent royalty audit procedures provided for in the agreements between the Contract Manufacturers and Qualcomm. Specifically, Apple prevented, restricted, and discouraged the Contract Manufacturers from complying fully with Section 14 of their respective license agreements.

f. Apple breached Section 4 by directing the Contract Manufacturers to misstate or manipulate the net selling price of the devices they sell to Apple, thereby causing the Contract Manufacturers not to pay the full amount of royalties owed to Qualcomm under their respective license agreements.

337. Qualcomm has been damaged by Apple's breaches of the Cooperation Agreement in an amount to be proven at trial.

COUNT VII

Breach of Implied Covenant of Good Faith and Fair Dealing

338. Qualcomm restates, re-alleges, and incorporates by reference each of the allegations set forth above as if fully set forth herein.

339. The Cooperation Agreement between Qualcomm and Apple constitutes a valid and enforceable agreement between the parties.

340. Qualcomm has performed all of its obligations under the Cooperation Agreement, and any conditions required for Apple's performance have occurred.

341. Both Apple and Qualcomm's purpose in entering into the Cooperation Agreement was to allow the parties to continue to work together to explore

mutually beneficial business opportunities that could deepen their business relationship.

342. Qualcomm has gone to great lengths to assist Apple. As discussed above, Qualcomm's engineers have responded to countless requests and demands from Apple to create innovative solutions for Apple's technical problems. By contrast, Apple unfairly has taken advantage of Qualcomm's cooperation efforts and actively sought to harm Qualcomm's business.

343. By deliberately making false statements to government agencies about Qualcomm's licensing practices and chipset business—in an effort to obtain a discount to Qualcomm's intellectual property—Apple has evaded the clear intent of Section 7 and denied Qualcomm the benefit of its bargain.

344. By inducing and inciting governmental agencies to attack Qualcomm's business, serving its own interests at the expense of Qualcomm, Apple has evaded the clear intent of Section 7 and denied Qualcomm the benefit of its bargain.

345. By partially disclosing confidential terms from its agreements with Qualcomm—and by deliberately mischaracterizing those terms—Apple sought to incite a backlash against Qualcomm from its other business partners and to further harm Qualcomm.

346. Apple's conduct is expressly covered by the text of Section 7; but even if it were not, Apple has violated the fundamental understanding between the parties and frustrated the purpose behind Section 7.

347. Apple has breached the covenant of good faith and fair dealing implied in every contract governed by California law.

348. Qualcomm has been damaged by Apple's conduct in an amount to be proven at trial.

COUNT VIII

Unjust Enrichment

349. Qualcomm restates, re-alleges, and incorporates by reference each of the allegations set forth above as if fully set forth herein.

350. In the alternative only, if there was no meeting of the minds on the meaning of Section 7 of the Cooperation Agreement, then:

a. No contract was formed and the Cooperation Agreement is unenforceable.

b. Section 7 is ambiguous and reasonably capable of different interpretations.

c. Qualcomm and Apple apparently attached materially different, irreconcilable meanings to Section 7 when the parties signed the Cooperation Agreement. *See* Letter from Apple to Qualcomm, dated November 16, 2016 [redacted]

d. Section 7 is a material term of the Cooperation Agreement.

e. Neither Qualcomm nor Apple knew or had reason to know the conflicting interpretation that the other party had applied to Section 7 when the parties entered into the Cooperation Agreement.

f. Because no contract was formed and the Cooperation Agreement is unenforceable, Apple received and unjustly retained the benefit of substantial payments from Qualcomm.

351. Qualcomm is therefore entitled to restitution of the value of all unjustly retained payments, in an amount to be proven at trial.

COUNT IX

Declaration That Qualcomm Is Released from Any Obligation To Make Further Payments Under the Cooperation Agreement

352. Qualcomm restates, re-alleges, and incorporates by reference each of the allegations set forth above as if fully set forth herein.

353. An actual controversy has arisen and now exists between Qualcomm and Apple, which have adverse legal interests, regarding whether Qualcomm is released from any obligation to make further payments under the Cooperation Agreement, including those for the second, third, and fourth quarters of 2016. There is a case or controversy of sufficient immediacy, reality, and ripeness to warrant the issuance of a declaratory judgment.

354. As alleged above, Qualcomm's payment obligations under the Cooperation Agreement were extinguished when Apple failed to satisfy the necessary conditions for receipt of payment under the Cooperation Agreement.

355. Further, under Section 7 of the Cooperation Agreement, Qualcomm's payment obligations apply only so long as Apple does not, *inter alia*, file a lawsuit against Qualcomm that includes any claim that Qualcomm failed to offer a license on FRAND terms and conditions, or any claim that the sale of a Qualcomm chipset exhausts any Qualcomm patents. By filing this lawsuit and others in the United Kingdom, China, and Japan, all of which include such claims, Apple relieved Qualcomm of its obligation to make further payments under the Cooperation Agreement.

356. In addition, under Section 10.4 of the Cooperation Agreement, Qualcomm is released from any payment obligations, including already accrued obligations, if Apple, *inter alia*, files a lawsuit against Qualcomm that includes any claim that Qualcomm failed to offer a license on FRAND terms and conditions, or any claim that the sale of a Qualcomm chipset exhausts any Qualcomm patents. By filing this lawsuit and others in the United Kingdom, China, and Japan, all of which

include such claims, Apple relieved Qualcomm of its obligation to make further payments under the Cooperation Agreement.

357. Therefore, Qualcomm seeks a declaratory judgment that Qualcomm is released from any obligation to make further payments under the Cooperation Agreement, including those for the second, third, and fourth quarters of 2016.

COUNT X

Violations of California Unfair Competition Law

358. Qualcomm restates, re-alleges, and incorporates by reference each of the allegations set forth above as if fully set forth herein.

359. Apple has engaged, and continues to engage, in unfair business acts and practices in violation of California Business and Professions Code § 17200.

360. Apple has engaged in unfair business practices, including by (i) attempting to cover up the performance differences between Qualcomm and Intel-based iPhone 7s; (ii) publicly claiming there was "no discernible difference" between those phone models; and (iii) threatening Qualcomm to prevent it from disclosing information regarding the superior performance of Qualcomm-based iPhones over Intel-based iPhones. Apple's conduct was designed to prevent consumers from insisting on the superior Qualcomm-based iPhones. Apple's conduct has harmed Qualcomm's chipset business. Absent Apple's conduct, Qualcomm's chipsets would be in higher demand, and Qualcomm would be able to sell more chipsets to meet that demand.

361. Apple's conduct also reduces incentives for Qualcomm to innovate superior products, knowing that the Apple may try to prevent consumers from learning about their capabilities.

362. As a result of Apple's unfair conduct, Qualcomm has lost both money and property, including loss of profits, loss of customers and potential customers, loss of goodwill and product image, and loss of business relationships.

363. There is no utility to any of Apple's unfair acts. In fact, Apple's business practices have harmed everyone who depends on the cellular industry, including Qualcomm and consumers.

364. Under California Business and Professions Code § 17203, Qualcomm is entitled to an injunction enjoining Apple from continuing to engage in the unfair business acts and practices enumerated above in order to prevent threatened injury to Qualcomm, as well as restitution of any amount Apple received as a result of Apple's conduct in violation of § 17200.

COUNT XI

Breach of the Master Software Agreement

365. Qualcomm restates, re-alleges, and incorporates by reference each of the allegations set forth above as if fully set forth herein.

366. The MSA between Qualcomm and Apple constitutes a valid and enforceable agreement between the parties.

367. Qualcomm has performed all of its obligations under the MSA.

368. Apple has materially breached the MSA [redacted]

369. [redacted]

[redacted]

370. [redacted]

371. [redacted] Qualcomm provides Apple with its software, which is then loaded onto an iPhone or iPad (by the Contract Manufacturers); [redacted]

372. [redacted]

373. Qualcomm has been damaged by each of Apple's material breaches of the MSA in an amount to be proven at trial. Qualcomm also is entitled to an injunction enjoining Apple from continuing to breach the MSA, [redacted]

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Qualcomm demands a jury trial on all issues triable by jury.

PRAYER FOR RELIEF

WHEREFORE, Qualcomm respectfully requests that the Court dismiss Apple's Complaint with prejudice and enter judgment as follows:

(a) Award compensatory and punitive damages, as provided by California Civil Code § 3294, for Apple's tortious interference with Qualcomm's contractual relationships with the Contract Manufacturers in an amount to be proven at trial and enjoin Apple from further tortious interference;

(b) Award damages for Apple's breach of the Statement of Work, dated February 28, 2013, as amended, in an amount to be proven at trial;

(c) Award damages, including but not limited to restitutionary damages, for breaches of Sections 4 and 7 of the Cooperation Agreement in an amount to be proven at trial; or alternately, award damages, including but not limited to restitutionary damages, for breach of the Cooperation Agreement's implied covenant of good faith and fair dealing in an amount to be proven at trial;

(d) Award restitution for the value of unjustly retained payments made by Qualcomm under the Cooperation Agreement in an amount to be proven at trial;

(e) Declare that Qualcomm is released from any obligation to make further payments under the Cooperation Agreement;

(f) Declare that each of Qualcomm's license agreements with the Contract Manufacturers, listed below, does not violate Qualcomm's FRAND commitments to ETSI;

i. Compal Subscriber Unit Licensing Agreement, dated February 10, 2000, as amended;

ii. Foxconn Subscriber Unit License Agreement, dated October 18, 2005, as amended;

iii. Wistron Subscriber Unit License Agreement, dated May 23, 2007, as amended; and

iv. Pegatron Subscriber Unit License Agreement, dated April 29, 2010, as amended.

(g) Declare that each of Qualcomm's license agreements with the Contract Manufacturers, listed below, does not violate competition law;

i. Compal Subscriber Unit Licensing Agreement, dated February 10, 2000, as amended;

ii. Foxconn Subscriber Unit License Agreement, dated October 18, 2005, as amended;

iii. Wistron Subscriber Unit License Agreement, dated May 23, 2007, as amended; and

iv. Pegatron Subscriber Unit License Agreement, dated April 29, 2010, as amended.

(h) Declare that Qualcomm satisfied its FRAND commitments to ETSI during negotiations with Apple;

(i) Enjoin Apple from engaging in its unfair business acts and practices in violation of California Business and Professions Code § 17200;

(j) Award Qualcomm restitution of the money Apple extracted from Qualcomm as part of its unfair business acts and practices in violation of § 17200;

(k) Award damages and attorneys' fees, pursuant to Section 11 of the MSA, for Apple's material breach of Section 5 of the MSA in an amount to be proven at trial;

(l) Enjoin Apple from continuing to breach the MSA, [redacted];

(m) Award reasonable attorneys' fees to Qualcomm;

(n) Award expenses, costs, and disbursements in this action, including prejudgment interest; and

(o) Award such other and further relief as the Court deems just and proper.

Dated: April 10, 2017

Respectfully submitted,

By: /s/ Evan R. Chesler

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