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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

IN RE: QUALCOMM ANTITRUST
LITIGATION

Case No. 5:17-md-02773-LHK

**PLAINTIFFS' FIRST AMENDED
CONSOLIDATED CLASS ACTION
COMPLAINT AND DEMAND FOR JURY
TRIAL**

CLASS ACTION

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1 Plaintiffs Sarah Key, Terese Russell, Carra Abernathy, Leonidas Miras and James Clark
2 (“Plaintiffs”), on behalf of themselves and all others similarly situated (the “Class,” as defined
3 below), on personal knowledge with respect to facts pertaining to them and upon information and
4 belief as to other matters, bring this Consolidated Class Action Complaint (“Complaint”) against
5 Defendant Qualcomm Incorporated (“Qualcomm”) for damages, injunctive relief, and other relief
6 pursuant to federal antitrust law and California antitrust, unfair competition, and consumer
7 protection laws. Plaintiffs demand a trial by jury and allege as follows:

8 **I. NATURE OF ACTION**

9 1. This lawsuit is brought against Defendant Qualcomm for its anticompetitive
10 practices, including its acquisition and maintenance of a monopoly in the market for modem
11 chips, refusal to license on non-discriminatory terms its standard essential patents, and coercive
12 *de facto* exclusive dealing agreements. This conduct has enabled Qualcomm to maintain its
13 dominant market position, inhibit competitors, and artificially inflate the all-in costs to original
14 equipment manufacturers (“OEM”), which are passed on to consumers who buy cellular devices.

15 2. The modem chips at issue in this case are used in cellular devices like smartphones
16 and tablets. Modem chips have no independent free-standing use. They must be made part of a
17 cellular device to serve any purpose. And the purpose served by modem chips is directly tied to
18 enabling wireless connectivity in cellular devices. As such, modem chips and the cellular devices
19 that incorporate them are stages of a single market supply chain. Increases in the price of modem
20 chips lead directly to price increases at the OEM and retail levels for cellular devices, and the
21 demand for modem chips is driven by end-purchasers of cellular devices like smartphones and
22 tablets. Thus, the market for modem chips and the market for the cellular devices incorporating
23 those chips are inextricably intertwined.

24 3. The market for cellular devices incorporating modem chips, particularly
25 smartphones and tablets, has grown tremendously. In 2007, Apple introduced the iPhone. A short
26 time later, smartphones using the Android operating system developed by Google were
27 introduced. Since then, sales of smartphones have exploded in the United States. In 2007,
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1 smartphone sales in the US were \$8.65 billion. In 2016, smartphone sales in the United States
2 were \$55 billion.

3 4. The financial performance of Qualcomm has been directly tied to the end market
4 for cellular devices. The enormous increase in the sales of smartphones has resulted in a
5 corresponding increase in Qualcomm's revenues, as recognized by Qualcomm. During the
6 Qualcomm Analyst Day held on November 15, 2012, Qualcomm highlighted the smartphone as
7 Qualcomm's "most important device":



DEMAND FOR JURY TRIAL

1 5. Qualcomm states that “its technologies powered the smartphone revolution and
2 connected billions of people.” In a recent filing, Qualcomm described itself “as one of the
3 world’s leading technology companies and a pioneer in the mobile phone industry.” Qualcomm
4 tells cellular device consumers by its website:

5 6. Just last week, Qualcomm’s executive vice president and general counsel, Don
6 Rosenberg, reiterated this connection when he said that “Qualcomm’s inventions are at the heart
7 of every iPhone.”

8 7. Qualcomm is the leading supplier of modem chips in the world and, in particular,
9 in the supply of modem chips that (1) comply with the CDMA standards and (2) are used in
10 premium-tier devices that comply with LTE standards.

11 8. But Qualcomm uses its dominant position in the supply of CDMA and premium
12 LTE modem chips to engage in clear anticompetitive conduct, including the following:

13 a. Refusal to License Competitors: Qualcomm refuses to license its cellular
14 standard essential patents (“SEPs”) to competing modem chip manufacturers, instead only
15 licensing its SEPs to cellular device OEMs (and/or those OEMs’ contract manufacturers),
16 even though Qualcomm is required to license the SEPs on fair, reasonable and non-
17 discriminatory (“FRAND”) terms. Qualcomm violated a duty to deal by this conduct.

18 b. “No-License-No-Chips” Policy: Qualcomm conditions OEMs’ access to its
19 modem chips on the OEMs’ acceptance of a non-FRAND license to Qualcomm’s cellular
20 SEPs. Unless OEMs agree to a separate SEP license with Qualcomm—one that covers all
21 devices the OEM sells regardless of the chip supplier—on Qualcomm’s preferred terms,
22 Qualcomm refuses to supply such OEMs with Qualcomm modem chips. As a result of its
23 threats to disrupt the supply of modem chips to OEMs, Qualcomm has extracted illegal,
24 non-FRAND royalty rates, which inflate the royalties on the wholesale price of cellular
25 devices. Among other things, these royalties: fail to apportion for (1) other SEPs held by
26 other patent holders and pledged to the same cellular standard, (2) unpatented features of
27 the cellular devices, and (3) the fact that the patents had already been exhausted by the
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1 sale of the Qualcomm chips. This above-FRAND incremental royalty is a surcharge that
2 raises an OEM's all-in cost of purchasing any modem chips, which includes (1) the price
3 of the modem chip itself and (2) any patent royalties that the OEM must pay to use the
4 modem chip in a cellular device. This practice reduces competitors' margins, limits
5 competitors' ability to invest in innovation, and restricts competitors' ability to compete
6 with the all-in price that Qualcomm charges for its modem chips.

7 c. Exclusive Deals that Foreclosed Competition: In addition to its refusal to
8 license to competing modem chip suppliers and its "no-license-no-chips" policy,
9 Qualcomm also coerces OEMs into anticompetitive agreements. Qualcomm coerced
10 Apple to enter into *de facto* exclusive dealing contracts that foreclosed Qualcomm's
11 competitors from gaining chip business at Apple, one of the world's leading smartphone
12 companies. This exclusive dealing arrangement caused substantial foreclosure in the
13 markets for premium LTE chips and premium LTE cellular devices, as Apple products
14 accounted for more than 40% of the premium LTE cellular phone sales in the United
15 States during the relevant period. Consumers, in turn, are impacted by purchasing cellular
16 devices from OEMs subject to such coercive arrangements.

17 9. There are no legitimate business justifications for Qualcomm's exclusionary and
18 anti-competitive conduct. To the extent Qualcomm has sought to achieve any legitimate business
19 purposes through its conduct, it has not used the least restrictive means for doing so, any claimed
20 pro-competitive benefit is outweighed by the anti-competitive harm, and any purported legitimate
21 business justifications are mere pretexts. Qualcomm's "no-license-no-chips" policy, refusal to
22 license its patents to competitors, and coercive agreements with OEMs—including its *de facto*
23 exclusive dealing arrangements with Apple—are unlawful restraints of trade.

24 10. Qualcomm's coercive agreements were designed to maintain its monopoly power
25 and hide its illegal conduct. In at least one such agreement, Qualcomm included a gag order to
26 prevent an aggrieved party from seeking judicial relief or otherwise challenging Qualcomm's
27 anticompetitive practices in an effort to keep courts, regulators, and consumers in the dark.

1 11. Qualcomm’s practices harm competition and the competitive process by
2 foreclosing competitors, reducing innovation, and raising costs to consumers. Indeed, the Korean
3 Fair Trade Commission (“KFTC”) has found that Qualcomm’s own internal documents show that
4 its licensing practices were designed to drive competitor chip manufacturers out of the market.

5 12. Qualcomm’s anticompetitive practices have allowed it to maintain its monopoly in
6 the CDMA and premium LTE chip markets. Since 2008, nine of the other eleven modem chip
7 manufacturers have exited the market, even though the market has more than doubled in size.

8 13. Qualcomm’s anticompetitive practices have enabled it to extract supra-FRAND
9 royalties for its patents. Apple alleges that it pays Qualcomm more patent royalties than it pays to
10 all other patent holders combined on the sale of its cellular devices, even though the other patent
11 holders collectively have greater intellectual property rights related to Apple’s products than
12 Qualcomm has. One study found that Qualcomm received royalties equivalent to 2% of global
13 cell phone sales in 2013 and 2014, while four other comparable companies—each with a similar
14 SEP portfolio—only received between 0.2 and 0.4%. According to the Federal Trade
15 Commission (“FTC”), Qualcomm has historically demanded a royalty rate of 5% on the net
16 selling price of a handset—“significantly higher than those of other licensors of cellular SEPs.”¹
17 Qualcomm’s own analysis in 2015 “found that revenues from Qualcomm’s licensing program are
18 ‘equivalent in size to the sum of ~12 companies with a form of technology licensing,’ including
19 leading cellular SEP licensors such as Ericsson, Nokia, and Interdigital.”²

20 14. Government antitrust agencies have fined Qualcomm more than \$2 billion for its
21 anticompetitive practices, and several investigations are still pending. The KFTC fined
22 Qualcomm \$208 million in 2009 and \$853 million in 2016 for Qualcomm’s anticompetitive
23 licensing practices. The Chinese National Development & Reform Commission (“NRDC”) fined
24 Qualcomm \$975 million in 2015 for its licensing practices relating to SEPs. The Japanese Fair
25 Trade Commission issued a cease and desist order against Qualcomm in 2009 for violating its

26 _____
27 ¹ Compl. ¶ 58, *Federal Trade Comm’n v. Qualcomm, Inc.*, No. 17-cv-00220, Doc. No. 1 (N.D.
28 Cal. Jan. 17, 2017) (“FTC Compl.”).

² *Id.* at ¶ 60.

1 FRAND obligations. The Taiwanese Fair Trade Commission announced an ongoing investigation
2 into Qualcomm's licensing practices in December 2015. And the European Commission in
3 December 2015 announced two statements of objection against Qualcomm for (1) paying Apple
4 to purchase chips from Qualcomm exclusively, stifling competition in the market and (2) pricing
5 chips below cost in order to drive out competitors.

6 15. On January 17, 2017, the FTC filed a complaint against Qualcomm for its
7 licensing practices in this Court. The FTC alleges that Qualcomm unlawfully maintained a
8 monopoly in chips and that its actions "raise[d] prices paid by consumers for cell phones and
9 tablets."³

10 16. Apple filed an antitrust action against Qualcomm in U.S. District Court for the
11 Southern District of California on January 20, 2017. Apple alleges that "Qualcomm's unlawful
12 business acts and practices significantly threaten and harm competition in the market for mobile
13 wireless handsets, tablets, and other CDMA- and LTE-compliant products, in California and
14 elsewhere, thereby causing injury to consumers. These threatened injuries include the inevitable
15 passing on to consumers of improper royalties demanded by Qualcomm."⁴

16 17. Subsequent to those actions, Qualcomm filed a lawsuit against Apple's contract
17 manufacturers in the U.S. District Court for the Southern District of California, Case No. 3:17-cv-
18 01010-GPC-MDD, in what Apple alleges is an attempt to exert pressure on Apple to acquiesce to
19 Qualcomm's non-FRAND royalty demands. Apple alleges that Qualcomm chose its targets
20 deliberately, knowing that such contract manufacturers merely assemble Apple's phones
21 according to Apple's and Qualcomm's specifications. Qualcomm alleges in that litigation that
22 Apple devices "would infringe numerous Qualcomm patents" if such devices were not licensed.
23 Yet, according to Apple, Qualcomm has not identified any patents that are (1) actually SEPs; (2)
24 valid and enforceable; (3) practiced by Apple's products; and (4) not exhausted by the authorized
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26
27 ³ *Id.* at ¶ 1.

28 ⁴ *Apple, Inc. v. Qualcomm, Inc.*, No. 3:17-cv-00108 (S.D. Cal.) at ¶ 659.

1 sales of Qualcomm chips. Apple has since alleged that eighteen Qualcomm patents do not meet
2 this standard and are instead non-essential, invalid, non-infringed, and/or exhausted.

3 18. Last week, Qualcomm filed a complaint in the International Trade Commission in
4 which it seeks to bar from importation Apple cellular devices – but only those that do not
5 incorporate a Qualcomm modem chip – for infringement of six non-SEP patents. *In re Certain*
6 *Mobile Electronic Devices and Radio Frequency and Processing Components Thereof*.

7 19. Plaintiffs bring this action on behalf of themselves and others similarly situated to
8 recover for injuries arising from Qualcomm’s violations of Sections 1 and 2 of the Sherman Act,
9 California’s Cartwright Act, and California’s Unfair Competition Law. Plaintiffs seek monetary
10 damages, injunctive relief, and any other available remedies to which they and the putative Class
11 members are entitled.

12 **II. THE PARTIES**

13 **A. Plaintiffs**

14 20. Plaintiff Sarah Key, who resides in California, purchased an Apple iPhone 6 for
15 personal use and not for resale during the past four years. Plaintiff was injured in fact and has lost
16 money or property as a result of Qualcomm’s unlawful and anticompetitive conduct.

17 21. Plaintiff Terese Russell, who resides in California, purchased an Apple iPad Mini,
18 an Amazon Kindle Paperwhite, an Apple iPhone 6 Plus, and a Samsung smartphone for personal
19 use and not for resale during the past four years. Plaintiff was injured in fact and has lost money
20 or property as a result of Qualcomm’s unlawful and anticompetitive conduct.

21 22. Plaintiff Carra Abernathy, who resides in California, purchased an Apple iPhone 7
22 Plus for personal use and not for resale during the past four years. Plaintiff was injured in fact and
23 has lost money or property as a result of Qualcomm’s unlawful and anticompetitive conduct.

24 23. Plaintiff Leonidas Miras, who resides in California, purchased a Samsung Galaxy
25 S7 for personal use and not for resale during the past four years. Plaintiff was injured in fact and
26 has lost money or property as a result of Qualcomm’s unlawful and anticompetitive conduct.

1 competitive conduct at issue took place in, originated in, or were implemented in whole or in part
2 within the State of California.

3 29. Venue is proper in this Court pursuant to Section 12 of the Clayton Act, 15 U.S.C.
4 § 22, and 28 U.S.C. § 1391 because a substantial part of the events giving rise to Plaintiffs'
5 claims occurred in this District, and Qualcomm transacts business and maintains facilities in this
6 District and thus is subject to personal jurisdiction here.

7 **IV. FACTUAL ALLEGATIONS**

8 **A. The Introduction of the iPhone and the Revolution in Consumer Mobile** 9 **Devices.**

10 30. The introduction of the Apple iPhone in 2007, soon followed by the introduction
11 of smartphones using the Android operating system, revolutionized the use of cellular devices
12 throughout the world. Prior to the introduction of the iPhone, cell phones, pagers, and
13 Blackberries had limited functionality. Smartphones soon developed functionality equivalent to
14 what desktop computers had offered only a few years before. Smartphones offered high quality
15 cameras, powerful video and graphics processing, better memory, and greater storage capacity.

16 31. The explosion in the sales of smartphones can be seen solely by reference to
17 Apple's revenues. In 2006, Apple had \$19 billion in revenues, of which 40% was attributable to
18 the iPod, 38% to Macs, and the remainder to other products. In 2016, Apple had \$216 billion in
19 revenues and the iPhone drove 63% of Apple's sales.

20 32. Smartphones have become ubiquitous for consumers and have changed commerce,
21 the development and distribution of software, and the fields of marketing and advertising.

22 **B. SSOs Standardize Cellular Communication Technology.**

23 33. Cellular devices such as smartphones and tablets include a semiconductor device
24 known as a baseband processor or modem chip. These chips manage the radio control function of
25 the cellular device, including signal generation, modulation, encoding, and frequency shifting,
26 enabling the cellular device to communicate with a wireless network. The chips must comply
27 with the communications standard that a wireless network uses. Chips that comply with multiple
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1 wireless network standards are known as “multi-mode” chips. Multi-mode chips can
2 communicate with networks that use multiple standards or on different networks using different
3 standards.

4 34. Qualcomm, along with many other companies, contributed to the development of
5 technological standards that govern how cellular devices used by consumers connect to the voice
6 and data networks. Companies in the wireless industry form standard setting organizations
7 (“SSOs”) to develop such technical standards to ensure interoperability and compatibility of
8 products and wireless networks for consumer use. Patents that are essential to practicing a
9 technical standard are called standard essential patents or “SEPs,” as such patents must be
10 licensed by companies in order to make products or services that practice the standard.

11 35. There are several different SSOs related to wireless communications. The
12 International Telecommunications Union (“ITU”) is a worldwide telecommunications SSO
13 comprised of governments and private companies. The Telecommunications Industry Association
14 (“TIA”) is the primary SSO in the U.S. for the communications industry. TIA is composed of
15 telecommunications companies that manufacture or supply products or services in the
16 telecommunications industry. The European Telecommunications Standards Institute (“ETSI”) is
17 an independent, non-profit organization based in France that is focused on producing global
18 communication standards. These SSOs and others have developed several generations of cellular
19 communications standards: 1G, 2G, 3G, and 4G.

20 36. When the 2G standard was first introduced in the early 1990s, two main standards
21 were developed: (1) the Global System for Mobile Communications (“GSM”) and (2) Code
22 Division Multiple Access (“CDMA”). Qualcomm’s SEPs constituted a significant portion of the
23 overall set of SEPs for the 2G-CDMA standard. While AT&T and T-Mobile chose to design their
24 networks around the GSM standard, Verizon and Sprint chose the 2G-CDMA standard.

25 37. When the 3G series of standards were introduced in the late 1990s, there were two
26 main standards: (1) the Universal Mobile Telecommunications System (“UMTS”) and (2) third-
27 generation CDMA (“3G-CDMA”). The UMTS system also incorporated CDMA technology by
28

1 using “wideband code division multiple access” (“WCDMA”) technology. GSM network
2 operators transitioned to the UMTS standard while the 2G-CDMA operators transitioned to the
3 3G-CDMA standard. Qualcomm had a smaller share of SEPs related to the UMTS and 3G-
4 CDMA standard than its share of the 2G-CDMA SEPs.

5 38. The 4G series of standards were first introduced in 2009. 4G standards allow for
6 substantially higher data-transmission speeds than 3G standards. Most major network operators
7 have chosen the Long-Term-Evolution (“LTE”) standard. The LTE standard does not rely on
8 CDMA-based technology. As a result, Qualcomm’s share of SEPs related to the LTE standard is
9 much lower than its share of the standards based on CDMA technology. Qualcomm holds a share
10 of SEPs for the LTE standard that is roughly equivalent to that of other industry competitors. One
11 study of declared LTE SEPs found that Qualcomm had a 13% share of “highly novel” essential
12 LTE patents, compared to 19% for Nokia and 12% for both Ericsson and Samsung.

13 39. Over time, competition among OEMs has developed across several handset tiers,
14 including premium (sometimes further divided into “premium” and “high”), mid, and low tiers.
15 Premium-tier smartphones, including flagship brands like Apple’s iPhone and Samsung’s Galaxy-
16 S line, typically include advanced features and technologies. Premium smartphones have become
17 increasingly valuable to OEMs. Premium smartphones tend to have higher prices and margins
18 than lower-tier products and are important for branding. The United States, where average selling
19 prices for handsets are significantly higher than the global average, is an especially important
20 market of leading OEMs.

21 40. Among cellular standards, LTE functionality, including its high data transmission
22 speed, is central to modern cellular devices, as consumers increasingly use them to transmit large
23 volumes of data. Cellular data traffic has grown exponentially in recent years, while the volume
24 of cellular voice traffic has remained flat.

25 41. The major U.S. cellular network operators have deployed the 4G LTE standard on
26 their networks. These network operators have also continued to use the prior standards. In some
27 areas, network operators have not yet replaced their 2G and 3G infrastructure with the new 4G
28

1 infrastructure. As a result, U.S. network operators require devices sold for use on their networks
2 to be backward compatible with 2G and 3G standards. Therefore, OEMs must purchase
3 multimode chips in order to make cellular devices that can function on the major U.S. wireless
4 networks.

5 **C. Qualcomm Makes Deceptive FRAND Commitments to SSOs in Setting**
6 **Wireless Standards.**

7 42. Qualcomm belongs to each of the leading SSOs involved in setting wireless
8 communication standards and has made commitments to such SSOs to license its SEPs on
9 FRAND terms. But Qualcomm has violated wholesale its FRAND commitments by refusing to
10 license its competitors directly, tying the provision of its chip supply to OEMs acquiescing to its
11 non-FRAND licensing terms and applying royalty terms in a discriminatory fashion, and bundling
12 the licensing of its SEP patents with non-SEP patents.

13 43. Absent appropriate safeguards, SEP holders could abuse the standard-setting
14 process via “patent hold-up,” which happens “when the holder of a standard-essential patent
15 (‘SEP’) demands excessive royalties after companies are locked into using a standard.” *Ericsson,*
16 *Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1209 (Fed. Cir. 2014); *see also* U.S. Dep’t of Justice &
17 U.S. Dep’t of Commerce, Patent & Trademark Office, *Policy Statement on Remedies for*
18 *Standard-Essential Patents Subject to Voluntary F/RAND Commitments* (Jan. 8, 2013).

19 44. Such abuse can be exacerbated when SEP holders like Qualcomm “over-declare”
20 patents as being essential to practicing a standard. ETSI—like many other SSOs—claims that it
21 has “[n]o involvement” in assessing “the validity and essentiality of patents declared as SEPs.”
22 *Legal Considerations*, ETSI Seminar 2014. These abuses contribute to “royalty stacking,” where
23 a single product-maker is required to pay “excessive royalties to many different holders of SEPs.”
24 *See Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 211217, at *11 (W.D. Wash.
25 Apr. 25, 2013).

26 45. To protect against such abuses—and to ensure the collaboration among
27 competitors embodied in the standard-setting process does not itself constitute an antitrust
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1 violation—SSOs require participants to publicly disclose any claimed SEPs and promise to
2 license such patents to anyone who practices the standard on a royalty-free or FRAND basis.
3 Absent such a promise, SSOs will usually design-around the claimed SEPs at issue. Qualcomm
4 induced the relevant SSOs to adopt Qualcomm technology by promising to license its cellular
5 SEPs on FRAND terms—promises that it knowingly repudiated after the standards were adopted.

6 46. FRAND royalties include several requirements designed to prevent misuse of the
7 monopoly power conferred by the patent’s adoption into a standard. FRAND royalties must
8 include both an appropriate royalty base and royalty rate and be limited to the contribution of the
9 patented technology to the standard. FRAND royalties do not include or reflect value attributable
10 to (1) the mere fact that the patent has been “locked in” to the standard; (2) other technologies
11 that contribute to the standard; or (3) other technologies outside the standard that are included in
12 the consumer device.

13 47. An SEP holder who makes a FRAND commitment also promises to license its
14 SEPs on a non-discriminatory basis, meaning in part that the SEPs will be licensed to any
15 “willing licensee.” This is a critical safeguard that prevents an SEP holder from engaging in
16 patent “hold up” by refusing to license competitors or by licensing competitors on discriminatory
17 and anticompetitive terms.

18 48. The FRAND commitment is an important tool to prevent monopoly hold-up and
19 ensure the standard is accessible to all who wish to implement it. *Microsoft*, 2013 WL 2111217,
20 at *11. The FRAND obligation is also critical to ensuring that standard-setting activities
21 themselves—which involve collaboration amongst competitors—do not run afoul of the antitrust
22 laws. As described by the Third Circuit:

23 [A] standard, by definition, eliminates alternative technologies. When a patented
24 technology is incorporated in a standard, adoption of the standard eliminates
25 alternatives to the patented technology. Although a patent confers a lawful
26 monopoly over the claimed invention, its value is limited when alternative
27 technologies exist. That value becomes significantly enhanced, however, after the
28 patent is incorporated in a standard. Firms may become locked into a standard
requiring the use of a competitor’s patented technology. The patent holder’s IPRs,
if unconstrained, may permit it to demand supracompetitive royalties. It is in such

1 circumstances that measures such as FRAND commitments become important
2 safeguards against monopoly power.

3 *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 314 (3d Cir. 2007) (citations omitted).

4 49. Violation of FRAND commitments can include demanding unreasonable royalties,
5 applying royalties in a discriminatory fashion or refusing to license competitors, and asserting
6 that non-essential patents are in fact SEPs. Qualcomm has engaged in all three forms of
7 anticompetitive and unlawful conduct.

8 50. Qualcomm made commitments to ETSI, TTA, the Alliance for
9 Telecommunications Industry Solutions (“ATIS”), and other SSOs that it would license its
10 cellular SEPs for the 2G, 3G, and 4G technological standards on FRAND terms.

11 51. ETSI participants must follow its Intellectual Property Rights (“IPR”) Policy,
12 pursuant to which members are required to disclose even potential standard-essential patents and
13 patent applications and make a written commitment to grant irrevocable patent licenses on
14 FRAND terms. *ETSI Rules of Procedure*, Annex 6, Clause 4, available at
15 http://www.etsi.org/website/document/legal/etsi_ipr-policy.pdf. Qualcomm has declared over
16 30,000 global assets to be “ESSENTIAL IPR.” Qualcomm has submitted declarations to ETSI
17 stating that “[t]o the extent that the IPR(s) . . . are or become, and remain ESSENTIAL in respect
18 of the ETSI Work Item, STANDARD and/or TECHNICAL SPECIFICATION,” Qualcomm is
19 “prepared to grant irrevocable licenses under this/these IPR(s) on terms and conditions which are
20 in accordance with Clause 6.1 of the ETSI IPR Policy.” Qualcomm made similar commitments to
21 the other SSOs described above.

22 52. Qualcomm is thus required to license its cellular SEPs on FRAND terms to
23 cellular device OEMs, as well as competing chip suppliers. Such potential licensees relied on
24 Qualcomm’s FRAND promises to SSOs. According to Apple, “Apple and other wireless device
25 manufacturers made conscious decisions to develop and sell products compatible with 3G/UMTS
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1 and 4G/LTE, relying on Qualcomm’s promise” to license on FRAND terms.⁵ As a result,
2 Qualcomm’s voluntary FRAND commitments were profitable for Qualcomm.

3 53. But, as shown below, Qualcomm has violated its promise to license its cellular
4 SEPs on FRAND terms, refusing to license to competing chip manufacturers at all and using its
5 resulting market power in CDMA and premium LTE chips to compel OEMs to accept non-
6 FRAND licensing terms.

7 **D. Qualcomm Acquires and Maintains Monopoly Power in the CDMA and LTE**
8 **Chip Markets Through Anticompetitive Conduct.**

9 54. Qualcomm’s QCT division manufactures Qualcomm’s integrated circuit products,
10 including modem chips. QCT produces modem chips that are compliant with 2G-CDMA, 3G-
11 CDMA, UMTS, and LTE standards. It also manufactures multi-mode processors that are
12 compliant with multiple standards.

13 55. Qualcomm’s QTL division, by contrast, is responsible for licensing thousands of
14 patents that Qualcomm has declared are essential to the 3G-CDMA, UMTS, and LTE standards.
15 An OEM must license all SEPs for the standards – including Qualcomm’s patents – in order to
16 manufacture cellular devices without infringing.

17 56. While QCT generates most of Qualcomm’s revenue, QTL is responsible for the
18 majority of Qualcomm’s profits. In 2015, QCT generated \$17.5 billion in revenue while QTL
19 generated \$7.95 billion. Between 2013 and 2015, QCT was responsible for approximately 70% of
20 Qualcomm’s revenue while QTL collected the remaining 30%. But QTL generated the vast
21 majority of Qualcomm’s profits—\$6.86 billion in earnings before taxes compared with \$2.46
22 billion for QCT.

23 57. Qualcomm holds a monopoly position in the CDMA modem chip market. From
24 2001 to 2015, Qualcomm had consistent market shares exceeding 80%. Qualcomm’s worldwide
25
26

27 ⁵ First Am. Compl. ¶ 51, *Apple, Inc. v. Qualcomm Inc.*, No. 17-cv-00108, ECF No. 83 (S.D. Cal.
28 Jun. 20, 2017) (“Apple FAC”).

1 share of the CDMA chip market for 2016 is likely to exceed or at least meet its historically
2 greater than 80% share of the market.

3 58. According to the FTC, “Qualcomm has faced limited competition for the supply of
4 CDMA processors,” over the past decade because “the only supplier of CDMA processors other
5 than Qualcomm was Via Technologies, a Taiwan-based company.”⁶ The FTC alleges that “Via’s
6 CDMA processor sales focused on processors used in lower-tier handsets” in part “because Via
7 has not offered multi-mode processors that combine CDMA functionality with UMTS or LTE
8 functionality.” Though Intel Corporation acquired Via’s CDMA business in 2015, it has not yet
9 commercialized a chip that integrates Via’s CDMA technology with Intel’s multi-mode
10 technologies. According to the FTC, “MediaTek Inc., another Taiwan-based semiconductor
11 company, licensed technology from Via in late 2013, and began to offer CDMA processors in
12 2015. MediaTek has not offered multi-mode CDMA processors suitable for use in flagship
13 handsets, however, and its sales of CDMA processors have been small.”⁷ Qualcomm has been
14 able to maintain its monopoly and use its dominant position to demand anticompetitive supply
15 and licensing terms from OEMs.

16 59. The major U.S. wireless carriers—Verizon, AT&T, T-Mobile, and Sprint—have
17 introduced LTE networks. As LTE functionality has advanced significantly since its introduction
18 in 2010, SSOs have released updated standards allowing for faster data speeds, and chip
19 manufacturers have added advanced features to support faster download and upload speeds,
20 multiple-input multiple-output (“MIMO”) capabilities, and power-saving features, among others.
21 OEMs usually require modem chips with advanced LTE functionality for premium-tier handsets,
22 as chips that only support earlier LTE features are not a reasonable substitute for ones that
23 support advanced LTE standards and features.

24 60. Competition among suppliers of LTE modem chips thus occurs in tiers, including
25 premium (sometimes further divided into “premium” and “high”), mid, and low tiers. A premium
26

27 ⁶ FTC Compl. ¶ 35.

28 ⁷ *Id.*

1 LTE modem chip supports advanced LTE functionality. Qualcomm recognizes this distinction
2 between chip and device tiers: its 2016 annual report refers to “premium-tier smartphones” and
3 Qualcomm’s “premium-tier integrated circuit products.”

4 61. Qualcomm has consistently been the dominant supplier of premium LTE modem
5 chips. From 2012 to 2014, Qualcomm’s worldwide share of the LTE chip market exceeded 80%.
6 In 2015, Qualcomm’s worldwide share was 69%. Qualcomm’s worldwide share of the LTE chip
7 market sales for 2016 remained at the dominant levels it has held since 2012.

8 62. Currently, Qualcomm’s only competitor in the LTE modem chip market is Intel.
9 For many years, Qualcomm effectively blocked Apple from using Intel as a chip supplier. But for
10 this exclusionary conduct, Apple would have agreed to use Intel’s chips in earlier iterations of the
11 iPhone. But because Intel’s chips were excluded, Intel (a) lost sales and margin, (b) missed out on
12 important opportunities to collaborate with Apple and cellular providers and to obtain
13 development feedback, and (c) lacked the marketplace credibility that a supply contract with
14 Apple would have offered. These consequences disadvantage Intel in attempting to compete
15 against Qualcomm for future chip sales to OEMs.

16 63. Qualcomm is also the only supplier of LTE modem chips that include CDMA
17 functionality. This type of chip is necessary for OEMs who manufacture cell phones and tablets
18 that can work on the Verizon and Sprint networks.

19 64. Both the CDMA and premium LTE modem chip markets are protected by high
20 barriers to entry, including (a) the required investment of hundreds of millions of dollars (at least)
21 in R&D; (b) intellectual property licensing requirements; (c) the scale necessary to achieve cost
22 efficiencies; and (d) Qualcomm’s exclusionary and anticompetitive conduct.

23 **1. Qualcomm Refuses to License to Competing Modem Chip Suppliers.**

24 65. Qualcomm acquired and maintained its monopoly over CDMA and premium LTE
25 modem chips by refusing to offer its SEPs on FRAND terms to competing modem chip suppliers.
26 Qualcomm itself acknowledged in a litigation filing that FRAND commitments are supposed to
27 “ensure[] that all industry participants will be able to develop, manufacture and sell products
28

1 compliant with the relevant standard without incurring the risk that patent holders will be able to
2 shut down those operations.”⁸ But from 1999 to 2007, Qualcomm only offered its cellular SEPs
3 to other chip manufacturers on non-FRAND terms. Since 2008, Qualcomm has simply refused to
4 offer *any* licenses to potential competitor chip manufacturers despite requests from Intel and
5 Samsung for FRAND licenses.

6 66. For example, in April 2006, Broadcom introduced a UMTS chip. Qualcomm
7 asserted to Broadcom and Broadcom’s customers that Broadcom did not have a license to
8 Qualcomm’s SEPs. Broadcom then attempted to negotiate a license with Qualcomm for its SEPs
9 on FRAND terms. Qualcomm proposed non-FRAND terms to Broadcom and other UMTS chips
10 manufacturers that prevented them from effectively competing. Qualcomm also demanded that its
11 UMTS chips manufacturer licensees not sell UMTS chips to OEMs that had not licensed
12 Qualcomm’s UMTS SEPs. Qualcomm further assessed royalty rates on OEMs that included the
13 value of UMTS chips in the overall device unit price even if those chips were not manufactured
14 by Qualcomm. Therefore, Qualcomm ensured that it would receive double royalties, one from the
15 OEM and another from the UMTS chip manufacturer on sales of non-Qualcomm UMTS chips.
16 By contrast, Qualcomm allowed OEMs to deduct the cost of a Qualcomm-manufactured UMTS
17 chip from the device unit price. These licensing practices violated Qualcomm’s commitment to
18 license on FRAND terms.

19 67. Qualcomm also retaliated against competitors that challenged its licensing
20 practices by filing patent infringement lawsuits. In July 2005, Qualcomm filed a patent
21 infringement action against Broadcom ten days after Broadcom had filed an antitrust action
22 against Qualcomm. In November 2005, Qualcomm filed a patent infringement lawsuit against
23 Nokia one week after Nokia filed an antitrust complaint against Qualcomm with the European
24 Commission.

25 68. As alleged by Apple, it would have been feasible and efficient for Qualcomm to
26 license its cellular SEPs at the component level to competing modem chip suppliers. Indeed, in

27 ⁸ FTC Compl. at ¶ 109.
28

1 2007, Qualcomm represented in a brief filed in the United States Supreme Court that it had
2 licensed competing modem chip suppliers with a running royalty calculated as a percentage of the
3 selling price of the chip.⁹ Qualcomm also stated in that filing that its practice of “licensing its
4 intellectual property to entities that produce (non-Qualcomm) chips” was one of its three
5 “primary sources of revenue.”¹⁰

6 69. Around 2007, Qualcomm transitioned away from licensing its SEPs to other chips
7 manufacturers. For example, Qualcomm’s 2006 10-K stated that it entered into “License
8 Agreements” with competing chip manufacturers. In contrast, in its 2007 10-K Qualcomm
9 replaced the term “License Agreements” with “Agreements.” By its 2008 10-K, Qualcomm stated
10 that in “every case, these agreements do not allow such integrated circuit suppliers to pass
11 through rights under Qualcomm’s patents to such suppliers’ customers, and such customers’ sales
12 of CDMA-based wireless subscriber devices into which suppliers’ integrated circuits are
13 incorporated are subject to the payment of royalties to us in accordance with that customer’s
14 separate licensing arrangement with us.” Qualcomm’s 2014 10-K stated that its policy was to
15 enter into “arrangements,” but not provide licenses that exhausted all patents with competing chip
16 manufacturers. In fact, Qualcomm expressly reserved the rights to seek royalties from the
17 customers of chip suppliers.

18 70. The KFTC has stated that modem chip manufacturers Samsung, Intel, and Via
19 have each requested SEP licenses from Qualcomm but have been refused. And the FTC alleges
20 that “Qualcomm refuses to license FRAND-encumbered cellular SEPs to competing suppliers of
21 chipsets, despite its FRAND commitments.”¹¹

22 71. Samsung, a potential competitor to Qualcomm for its modem chips, states that “as
23 a direct consequence of Qualcomm’s refusal to license” it does not “sell licensed CDMA or
24 premium LTE chipsets in competition with Qualcomm”¹² Samsung manufactures chips for

25 _____
26 ⁹ Brief of Qualcomm Inc. as Amicus Curiae Supporting Respondent at 7, *Quanta Computer, Inc.*
v. LG Elecs., Inc., 553 U.S. 617 (2008) (No. 06-937).

27 ¹⁰ *Id.*

¹¹ FTC Compl. ¶ 59.

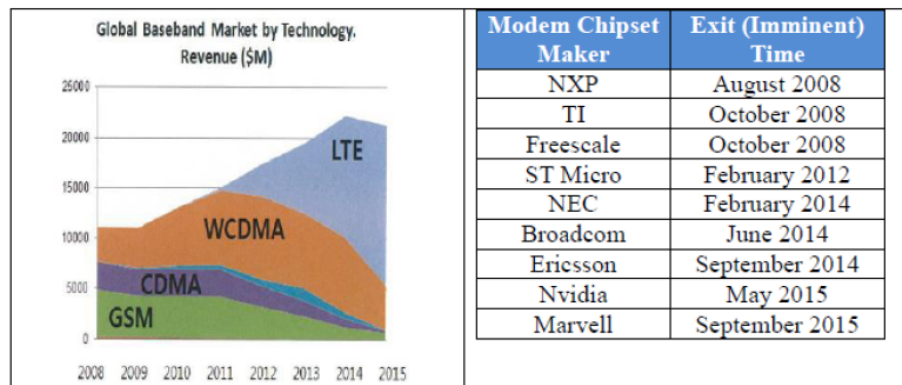
28 ¹² Brief of *Amici Curiae* Samsung Electronics Co. Ltd. and Samsung Semiconductor, Inc. in

1 use in some of *its own* cellular devices because it has a license for end cellular devices from
 2 Qualcomm. But such self-supply does not constitute “meaningful competition.”

3 72. A license to Qualcomm’s cellular SEPs would provide substantial benefits to other
 4 modem chip suppliers and their customers. Because Qualcomm refuses to license FRAND-
 5 encumbered SEPs to its competitors, these competitors cannot offer OEMs chips that convey the
 6 rights to Qualcomm’s cellular SEPs. Qualcomm violated a duty to deal by this conduct.

7 73. In 2008, Deutsche Bank identified eleven major suppliers of modem chips. Since
 8 2009, the modem chip market has grown from approximately \$10 billion to over \$20 billion in
 9 revenue. Yet since 2008, nine of the major modem chip manufacturers have exited the market and
 10 none have entered. According to the KFTC, the Herfindahl-Hirschman index for the modem chip
 11 market has increased from 2,224 in 2008 to 4,670 in 2014. The 4G LTE modem chip market has
 12 gone from moderately concentrated to extremely concentrated in the same period of time. The
 13 KFTC prepared the following chart showing Qualcomm’s success in driving competitors from the
 14 modem chip market:

15 <Market Growth Trend in the Modem Chipset Market and Market Exit by Major
 16 Chipset Companies>



17
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 19
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 23 **2. Qualcomm Further Abuses Its Chip Monopoly via Its Anti-Competitive “No-License-No-Chips” Policy.**

24 74. Having acquired and maintained its monopoly in CDMA and premium LTE chips,
 25 Qualcomm conditions OEMs’ access to its chips on accepting a separate license to Qualcomm’s

26 _____
 (... cont’d)

27 Opposition to Qualcomm Incorporated’s Motion to Dismiss (“Samsung Amici Br.”) at 9, *Federal*
 28 *Trade Comm’n v. Qualcomm Inc.*, Case No. 17-cv-00220, ECF No. 99 (N.D. Cal. May 15, 2017).

1 cellular SEPs on Qualcomm’s preferred terms, which results in the payment of substantial
2 royalties to Qualcomm on sales of cellular devices—regardless of whether the devices use
3 Qualcomm’s or a competitor’s chips. The FTC has referred to this practice as Qualcomm’s “no-
4 license-no-chips” policy.

5 75. As alleged by the FTC, Qualcomm’s “no-license-no-chips” policy is exclusionary,
6 as it “skews Qualcomm’s license negotiations with OEMs toward outcomes that raise the all-in
7 prices that OEMs must pay on both Qualcomm [chipsets] and those supplied by Qualcomm’s
8 competitors,” which “reduce[s] demand for competitors’ processors and raise[s] handset prices
9 paid by consumers.”

10 76. The incremental royalty that OEMs pay to Qualcomm operates as a surcharge that
11 raises OEMs’ costs of using chips supplied by Qualcomm’s competitors, reduces demand for
12 competitors’ processors, and reduces the ability and incentives of competitors to invest and
13 innovate—thereby maintaining Qualcomm’s monopoly power and inflating cellular device prices
14 paid by consumers.

15 77. When considering cellular device designs, OEMs consider the all-in cost of a chip,
16 consisting of both (a) the price of the chip and (b) any patent royalties the OEM must pay to use
17 that chip in a cellular device.

18 78. By raising the latter cost component Qualcomm’s surcharge increases the all-in
19 cost to an OEM of using a competitor’s chips and weakens demand for those chips, reducing
20 competitors’ sales and their incentive to come up with new technologies. This practice could be
21 undercut if Qualcomm licensed its SEPs directly to its chip competitors who are not dependent on
22 or beholden to Qualcomm’s supply of chips.

23 79. As the FTC has explained, Qualcomm’s policy has also “limited competitors’
24 ability to discipline the all-in prices that Qualcomm charges for [chipsets],” as “[i]f Qualcomm
25 used its dominance solely to raise the nominal prices of its own processors, those price increases
26 would spur OEMs to seek substitutes and would attract entry and competitive pricing from
27 [chipset] competitors.” Instead, by imposing a surcharge on OEMs regardless of whether they
28

1 use Qualcomm's chips or those of a competitor, Qualcomm is able to raise the all-in price of its
2 chips without fear of competition.

3 80. Although Qualcomm nominally imposes the same surcharge on all chip sales, its
4 surcharge does not affect all of Qualcomm's competitors equally. For Qualcomm, the surcharge is
5 a means to extract a higher price for Qualcomm's own chips without being undercut by
6 competing chip manufacturers. The revenue from Qualcomm's surcharge comes back to
7 Qualcomm as a form of profit and maintains Qualcomm's chip monopoly.

8 81. In addition, Qualcomm can discriminate in its royalties: it can offer OEMs
9 incentive payments to discount Qualcomm's above-FRAND royalties if an OEM uses
10 Qualcomm's chips as opposed to those of a competitor. Qualcomm's competitors, by contrast,
11 cannot offer OEMs such incentive payments. Qualcomm's surcharge thus reduces competitors'
12 chip sales and margins and artificially inhibits its competitors' ability to compete against
13 Qualcomm in the market.

14 82. Nor can Qualcomm contend that its royalty is non-discriminatory because it
15 charges a 5% royalty regardless of whether an OEM purchases Qualcomm's or a competitor's
16 chips. Because Qualcomm offers incentives or rebates on its own chips—one that is not available
17 if an OEM buys a competitor's chips—Qualcomm's royalty and surcharge are, in fact,
18 discriminatory. If Qualcomm added a surcharge only to its own all-in chip price, competitors
19 would underbid Qualcomm in the market for chips. Qualcomm's chip surcharge works because
20 Qualcomm also raises OEMs' all-in cost of using competitors' chips by the same amount.

21 83. Absent Qualcomm's "no-license-no-chips" policy, OEMs could attack
22 Qualcomm's royalty demands in court as being non-FRAND on several grounds, including that:

- 23 a. Qualcomm's royalties do not reflect the value contributed by its patented
24 inventions to the standard and are multiples of the royalties charged by other SEP
25 licensors with similar technical contributions;

1 b. Qualcomm calculates royalties as a percentage of the cellular device's
2 price, which has been rejected under patent damages law that looks to the smallest
3 saleable practice unit as the basis for a royalty;

4 c. Qualcomm's standard royalty rate has not fallen, even though many of
5 Qualcomm's SEPs have expired; and

6 d. Qualcomm's royalty rate does not account for the value of any cross-
7 licensed patents it extracts from OEMs.

8 84. Such suits, when litigated to judgment, have produced royalty rates far below the
9 SEP licensor's original demands. For example, Motorola, an SEP licensor, initially demanded
10 that Microsoft pay SEP royalties of \$6-\$8 for every Xbox sold, but the court ultimately set the
11 FRAND rate at \$0.04 per Xbox. *See Microsoft Corp. v. Motorola, Inc.*, No. C 10-1823, 2013 WL
12 2111217, at *99-101 (W.D. Wash. Apr. 25, 2013).

13 85. As alleged by the FTC, Qualcomm's "no-license-no-chips" policy is unique
14 among suppliers of semiconductor and cellular-equipment components. Other component
15 suppliers rely on component sales to convey their intellectual property rights to OEM customers,
16 rather than selling the components and also entering into a separate intellectual property license.¹³
17 Indeed, under the doctrine of patent exhaustion, the "authorized sale of an article that
18 substantially embodies a patent exhausts the patent holder's rights and prevents the patent holder
19 from invoking patent law to control postsale use of the article." *Quanta Computer, Inc. v. LG*
20 *Elects., Inc.*, 553 U.S. 617, 638 (2008). Thus, a supplier's sale of a component to an OEM would
21 already exhaust their patent rights, obviating the need—and making it unlawful—to require a
22 separate patent license. The Supreme Court recently reaffirmed that exhaustion is "triggered by
23 the patentee's decision to give that item up and receive whatever fee it decides is appropriate" for
24 the patented article." *Impression Prods., Inc. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523, 1537 (2017)
25 (citations omitted). The Patent Act's "right to exclude just ensures that the patentee receives *one*
26 *reward*—of whatever amount the patentee deems to be 'satisfactory compensation'—for every

27 _____
28 ¹³ *See id.* at ¶¶ 64-68.

1 item that passes outside the scope of the patent monopoly.” *Id.* (citations omitted and emphasis
2 added). By insisting on both a license fee and the sale price of the chips, Qualcomm is violating
3 the exhaustion doctrine. To the extent any portion of Qualcomm’s portfolio is not exhausted by
4 the sale of the Qualcomm chips, Qualcomm demands that its customers pay for the same
5 exhausted patents in order to obtain a license for any patents that are not exhausted.

6 86. By violating the exhaustion doctrine, Qualcomm is exceeding the legal limits of its
7 patent monopoly and instead unlawfully abusing its monopoly power. A patentee must respect
8 “established limits . . . in employing the leverage of his patent to control or limit the operations of
9 a licensee.” *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 136 (1969). Any
10 license restrictions and conditions must be “reasonably within the reward which the patentee by
11 the grant of the patent is entitled to secure.” *General Talking Pictures Corp. v. W. Elec. Co.*, 305
12 U.S. 124, 127 (1938) (quotation omitted).

13 87. Moreover, the fact that Qualcomm charges a royalty based upon the price of a
14 cellular device means that Qualcomm charges OEMs of high-value, feature-rich smartphones
15 substantially more for a license than it charges OEMs of basic cellphones, despite the fact that the
16 embodied wireless communications functionality in the two products is the same. This is also
17 inconsistent with Qualcomm’s FRAND commitments. *In re Innovation IP Ventures, LLC*
18 *Patent Litig.*, No. 11 C 9308, 2013 WL 5593609, at *38 (N.D. Ill. Oct. 3, 2013) (holding a
19 FRAND licensor “cannot discriminate between licensees on the basis of their position in the
20 market”).

21 88. Similarly, Qualcomm demanding a royalty based on the price of the cellular device
22 means that Qualcomm receives a higher royalty for features unrelated to Qualcomm’s technology.
23 For example, Apple sells different iPhone models with varying amounts of memory, with the
24 higher-memory versions selling for a significant premium (though the phones provide the same
25 standardized cellular functionality). This means that Qualcomm receives a significantly higher
26 royalty for the higher-memory iPhone models, notwithstanding that the difference in price
27
28

1 between the models is not attributable to Qualcomm's cellular SEP patents or Qualcomm's
2 products.

3 89. Qualcomm's practice of setting its royalty base as the wholesale price of the
4 cellular device also ignores binding Supreme Court and Federal Circuit precedent forbidding
5 patent owners from basing a royalty on an entire device unless the patent at issue drives consumer
6 demand for the whole device. Otherwise, patent holders are required to base royalties on the
7 smallest salable patent-practicing unit.

8 90. Starting in 2001, Qualcomm used the threat of artificial shortages in the supply of
9 CDMA chips to discipline OEMs. Qualcomm threatened OEMs with the loss of various
10 Qualcomm services if the OEMs purchased modem chips from Qualcomm competitors.

11 91. In just one example, the KFTC and Intel allege that Qualcomm originally signed a
12 2G-CDMA licensing agreement with a customer in 1993. In the early 2000s, the customer
13 attempted to renegotiate the licensing agreement to reflect the decrease in the proportion of
14 CDMA SEPs that Qualcomm owned. The customer indicated that it would stop paying certain
15 royalties and suggested that Qualcomm agree to settle the dispute through arbitration. Qualcomm
16 instead threatened to terminate the customer's chip supply. Because a disruption to its chip supply
17 would have threatened its handset business, the customer quickly conceded.

18 92. On April 22, 2004, Qualcomm's President was quoted as describing modem chips
19 as "very much a supply limited market" and stating that a wireless carrier had been "constrained
20 by the number of phones they can get."

21 93. Throughout 2012, there was a significant shortage in Qualcomm's supply of LTE
22 chips. This shortage increased Qualcomm's market power and allowed it to demand inflated
23 royalty rates on its patent portfolio.

24 94. In 2016, LG Electronics ("LG") initiated arbitration against Qualcomm because of
25 Qualcomm's unfair demands during patent licensing negotiations. Qualcomm and LG eventually
26 reached a settlement in which Qualcomm agreed to increase its supply of chips to LG.

27
28

1 95. Absent Qualcomm’s dominance in CDMA and premium LTE chips, an OEM
2 could protect itself against a supply disruption either (a) by substituting non-Qualcomm
3 processors in the new handset designs or (b) by using the prospect of substitution to negotiate
4 supply terms with Qualcomm that protect the OEM from disruption. Qualcomm has prevented the
5 former by refusing to license its competitors on FRAND terms or at all, thereby driving them
6 from the market. And it has also prevented the latter by using its market power to force OEMs
7 like Apple to accept supply terms that leave them vulnerable to a supply disruption in the event of
8 a license dispute. For example, Qualcomm used its market power as leverage to require Apple to
9 accept unreasonable contract terms, including the fact that Qualcomm refused to guarantee Apple
10 a supply of chips and arbitrarily limited its liability for failure to supply chips.

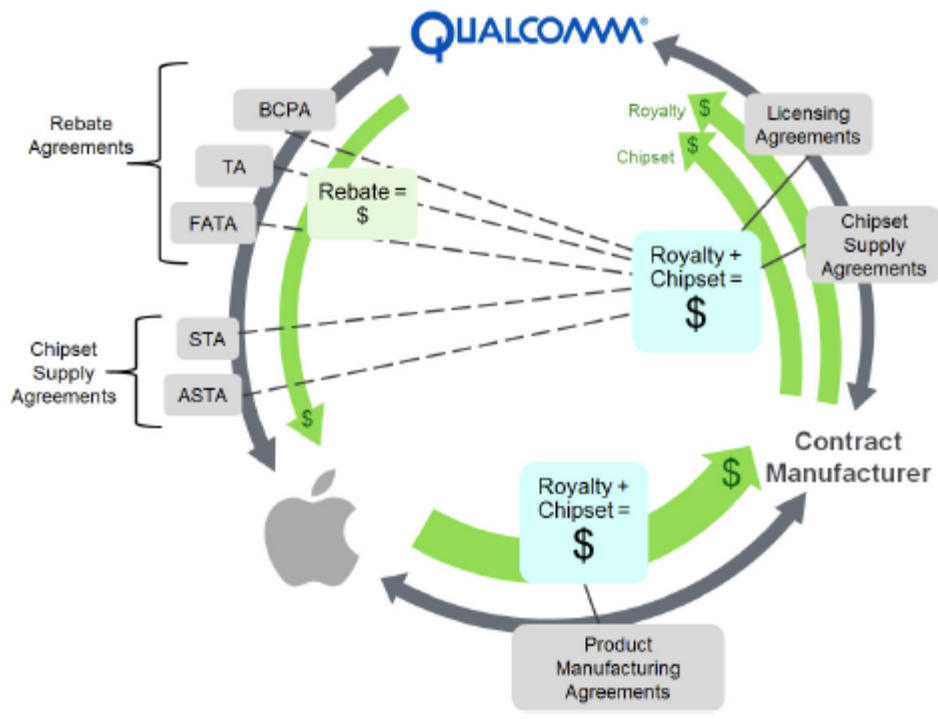
11 96. Qualcomm’s “no-license-no-chips” policy has significantly influenced the course
12 of license negotiations with a number of OEMs, including Apple. To maintain access to
13 Qualcomm’s chips, OEMs have been coerced into accepting royalty and other license terms that
14 they would not otherwise accept. As a result of the “no-license-no-chips” policy, the royalties that
15 OEMs pay Qualcomm on handsets using non-Qualcomm chips do not reflect OEMs’ assessment
16 of patent royalties that a court or neutral arbiter would deem reasonable, including in light of
17 Qualcomm’s FRAND commitments. Instead, the royalties reflect Qualcomm’s dominant position
18 in the chip markets, and include the added increment that OEMs pay to Qualcomm to avoid
19 disruption of processor supply. This inflated supra-FRAND royalty is ultimately passed onto
20 consumers of cellular devices like Plaintiffs.

21
22 **3. Qualcomm Abuses its Market Power to Coerce Chip Exclusivity and**
23 **Other Anticompetitive Licensing Terms from Apple.**

24 97. Apple manufactures iPhones and iPads and is one of the largest purchasers of
25 modem chips in the world. Apple employs contract manufacturers that assemble iPhones and
26 iPads and who, in turn, pay patent royalties to Qualcomm, passing the cost along to Apple. Apple
27 then passes the cost along to its customers.

1 98. Apple repeatedly engaged in negotiations with Qualcomm concerning the
 2 excessive royalties Qualcomm charged such contract manufacturers to license its SEPs.
 3 Qualcomm refused to negotiate SEP royalty rates for licenses directly with Apple. Instead,
 4 Qualcomm gave Apple rebates, discounts, and other incentives to ensure Apple would continue to
 5 use Qualcomm’s chips and that Qualcomm could continue its “no-license-no-chips” policy.
 6 Qualcomm also required that Apple’s contract manufacturers keep their license agreements with
 7 Qualcomm secret, preventing Apple from determining how much in royalties Qualcomm was
 8 charging.

9 99. According to Apple, the following diagram illustrates the complex web of
 10 contracts, some of them secret, that underlie Qualcomm’s anticompetitive conduct relating to
 11 Apple:



24 100. According to Apple, in 2007, under their Marketing Incentive Agreement
 25 (“MIA”), Qualcomm agreed to pay to Apple marketing incentives in return for Apple’s
 26 agreement not to incorporate the proposed 4G WiMax cellular standard that Intel advocated and
 27

1 Qualcomm opposed. That action helped ensure the adoption of the 4G LTE standard that
2 contained a higher percentage of Qualcomm’s SEPs.¹⁴

3 101. According to Apple, in 2009, Qualcomm and Apple entered into the Strategic
4 Terms Agreement (“STA”), which addressed the process by which Qualcomm supplied chips and
5 associated software to Apple. That agreement restricted Apple’s ability to sue Qualcomm for
6 patent infringement concerning Qualcomm chips. While Apple generally negotiates firm supply
7 commitments with its component vendors, Qualcomm refused to provide Apple such a
8 commitment, instead arbitrarily capping its liability for the failure to supply, and reserving for
9 itself the ability to terminate its obligation to supply chips to Apple’s contract manufacturers.
10 Qualcomm’s unilateral right to terminate the supply of chips to Apple’s contract manufacturers
11 was retained in the Amended and Restated Strategic Terms Agreement (“ASTA”), effective
12 February 28, 2013.¹⁵

13 102. According to Apple, in 2011, Qualcomm and Apple entered into a new
14 agreement—the 2011 Transition Agreement (“TA”). Qualcomm agreed to make substantial
15 incentive payments to Apple if Apple agreed to exclusively use Qualcomm chips in all new
16 iPhone and iPad models. Apple would forfeit all of these incentive payments if it used any non-
17 Qualcomm chips. This threatened forfeiture tied to exclusivity was disguised by Qualcomm as a
18 marketing payment paid pursuant to the TA. As part of that agreement, Apple could not initiate
19 any action or litigation against Qualcomm for intellectual property infringement. These incentive
20 payments were distinct from those incentive payments, or rebates, Qualcomm provided Apple in
21 furtherance of its “no-license-no-chips” policy.¹⁶

22 103. This agreement was modified in 2013 in the First Amendment to Transition
23 Agreement (“FATA”), so that it would continue through 2016. In the 2013 modification,
24 however, Qualcomm insisted on a new condition: Apple could neither initiate nor induce others to
25 initiate litigation based on Qualcomm’s failure to offer licenses on FRAND terms. According to

26 ¹⁴ Apple FAC ¶ 112.

27 ¹⁵ *Id.* at ¶ 113.

28 ¹⁶ *Id.* at ¶ 114.

1 Apple, Qualcomm also agreed to make separate substantial incentive payments to Apple so long
2 as Apple exclusively sourced chips from Qualcomm. If Apple launched a new device with non-
3 Qualcomm chips, it would forfeit past and future incentive payments. During this period, Apple
4 continued to pay Qualcomm a higher amount in royalties than it collectively paid to other
5 licensors who together owned a far higher percentage of the SEPs for the 4G standard.¹⁷

6 104. In Apple and Qualcomm’s 2013 Business Cooperation and Patent Agreement
7 (“BCPA”), Qualcomm agreed to make payments to Apple consistent with the marketing incentive
8 payments from the MIA, though smaller and renamed BCPA Payments.

9 105. Qualcomm also used its market power as leverage to make Apple accept
10 unreasonable and anticompetitive licensing terms. Qualcomm refused to guarantee Apple a
11 supply of chips, arbitrarily limited its liability for failure to supply chips, and forced Apple to
12 cross-license its own patents to Qualcomm or other Qualcomm licensees. Apple itself stated in its
13 lawsuit that “[f]or several years, Qualcomm’s actions deterred Apple from switching to Intel’s or
14 other potential competitors’ chipsets, substantially diminishing competition in the interim” and
15 that “[e]ven today, Qualcomm is actively engaging with network carriers in the United States,
16 attempting to persuade them not to support or sell Apple devices with Intel chipsets.”¹⁸

17 106. As alleged by the FTC, “Qualcomm’s 2011 and 2013 agreements with Apple
18 were, and were intended by Qualcomm to be, *de facto* exclusive deals that were as effective as
19 express purchase requirements and that essentially foreclosed Qualcomm’s competitors from
20 gaining chipset business at Apple,” since:

21 a. “Apple had at all relevant times an interest in developing and working with
22 additional suppliers of [chips]”;

23 b. “The large penalties that Apple would face under its agreements with
24 Qualcomm if it sourced [chipsets] from another [chipset] supplier prevented Apple
25
26

27 ¹⁷ FTC Compl. ¶ 123; Apple FAC ¶ 103.

28 ¹⁸ Apple FAC ¶ 98.

1 from using alternative suppliers during the effective exclusivity period under these
2 agreements”;

3 c. “Although a price-cost test is not required to assess the competitive effects
4 of Qualcomm’s agreements with Apple, the penalties under these agreements are
5 sufficiently large that, if they were attributed as discounts to the price of
6 Qualcomm chipsets reasonably contestable by a Qualcomm competitor, the
7 resulting price of Qualcomm’s processors would be below Qualcomm’s cost”.¹⁹

8 107. Because of this *de facto* exclusive dealing agreement, Apple sourced chips
9 exclusively from Qualcomm for all new iPads and iPhone products between October 2011 and
10 September 2016.

11 108. Qualcomm’s exclusive deal with Apple excluded competition from other chip
12 suppliers and harmed competition. As the FTC alleges, “Apple is a particularly important OEM
13 from the perspective of a nascent [chip] supplier and confers benefits on a nascent supplier that
14 make the supplier a stronger contender for other OEMs’ business”:

15 a. “Apple sells large volumes of premium handsets that require premium LTE
16 [chipsets]. These processors ordinarily command higher prices and margins than
17 lower-tier chipsets. Supplying Apple helps a nascent supplier achieve a scale of
18 business that confers research-and-development flexibility”;

19 b. “A nascent supplier learns directly from engagement with Apple
20 engineering teams and this engagement improves the supplier’s [chip] offerings;

21 c. “A nascent supplier achieves technical validation by demonstrating its
22 ability to meet Apple’s demanding technical requirements”;

23 d. “A nascent supplier engaged by Apple can field-test its processors through
24 global launches that require real-world work with network operators and
25 infrastructure vendors.”²⁰

26
27 ¹⁹ See FTC Compl. ¶ 125.

28 ²⁰ FTC Compl. at ¶ 129.

1 109. Qualcomm’s exclusive agreements with Apple prevented Qualcomm’s competitors
2 from attaining these benefits and foreclosed a substantial share of the market for premium LTE
3 chips. For example, Intel has stated that “Qualcomm’s exclusive arrangements with Apple
4 foreclosed the share of the market that the Ninth Circuit has required in Section 1 cases, *see Tele*
5 *Atlas N.V. v. Navteq Corp.*, No. C-05-01673 RMW, 2008 WL 4809441, at *21 (N.D. Cal. Oct.
6 28, 2008), as well as the more relaxed standard that courts have required in Section 2 cases, *see*
7 *Microsoft*, 2534 F.3d at 70.”²¹ Intel confirms the FTC’s allegations that it had “limited LTE
8 baseband processor sales and [had] achieved modest success . . . only recently when it began to
9 supply a portion of Apple’s baseband processor requirements for the iPhone 7.”²² Indeed, Intel’s
10 “prior performance was significantly impacted by Qualcomm’s exclusive contracts with Apple, as
11 well as Qualcomm’s earlier efforts to defeat adoption of the WiMax standard,” and that
12 “Qualcomm’s conduct locked Intel out of Apple for four years,” causing Intel to “lose substantial
13 revenues, the vital ability to scale to other customers more quickly, and the many benefits that
14 come from working with the world’s most commercially successful mobile phone.”²³ The fact
15 that Intel has recently begun supplying a portion of the chips Apple incorporates in the iPhone 7
16 is a result of the fact that the many investigations of Qualcomm’s illegal practices across the
17 globe deterred Qualcomm from imposing another illegal exclusive deal on Apple.

18 110. Since approximately 2014, Apple and Qualcomm have engaged in licensing
19 discussions in recognition of the fact that certain of their agreements were set to expire at the end
20 of 2016.

21 111. Apple alleges that in 2015, Qualcomm made an offer to Apple to license
22 Qualcomm’s Chinese 3G/4G declared-essential patents on terms purportedly “consistent” with
23 those that resolved an inquiry by Chinese regulators into Qualcomm’s licensing practices. Apple
24 rejected the proposal because it was not FRAND, was excessive compared to other licenses to

25 _____
26 ²¹ Brief of *Amicus Curiae* Intel Corporation in Support of Plaintiffs’ Opposition to Defendant’s
27 Motion to Dismiss at 20, *Federal Trade Commission v. Qualcomm Inc.*, No. 17-cv-00220, ECF
28 No. 92-1 (N.D. Cal. May 12, 2017).

²² *Id.* (quoting FTC Compl. ¶ 45).

²³ *Id.* at 20-21 (citing FTC Comp. ¶ 120).

1 cellular SEPs that Apple negotiated at arms' length, and would not help resolve the parties'
2 worldwide licensing dispute.

3 112. On February 5, 2016, Apple expressed its interest in exploring a direct license to
4 certain patents in Qualcomm's portfolio. During subsequent discussions, Qualcomm refused to
5 identify which of its purported SEPs it alleged Apple's products practiced. Shortly thereafter,
6 Qualcomm removed from its website a public list of the U.S. patents it disclosed to ETSI and
7 precluded archived searching of the list, thereby making it harder for licensees to determine
8 which patents Qualcomm has declared to be SEPs.

9 113. After 25 months of negotiations, Qualcomm finally agreed to share with Apple
10 patent information about Qualcomm's SEP portfolio, sharing such information right before the
11 2016 holidays. Over the course of two in-person meetings with Qualcomm engineers, Qualcomm
12 outside counsel, and Apple in-house and outside counsel, Qualcomm provided infringement
13 allegations about 20 U.S. patents it has declared to ETSI as essential to 3G/UMTS and/or
14 4G/LTE. Apple filed suit for declaratory judgment that many of the patents on Qualcomm's
15 March 18, 2016 list are not infringed. Apple has since identified nine additional patents from
16 Qualcomm's March 18, 2016 list that it alleges are not infringed by Apple or the purchasers of
17 Apple's products. Apple further alleges that such patents are non-essential, invalid, and/or
18 exhausted.

19 **4. Qualcomm Attempts to Silence Apple.**

20 114. According to Apple, Qualcomm, through the BCPA, attempted to prevent its
21 practices from coming to light by imposing a gag order on Apple to preclude it from bringing a
22 claim that Qualcomm's patents were exhausted. Qualcomm has asserted a counterclaim against
23 Apple, alleging that Apple's obligation not to file an exhaustion suit continued even beyond the
24 expiration of the BCPA.

25 115. On or around December 7, 2015, Qualcomm and Apple entered into the STA
26 Assignment Agreement, under which Qualcomm was given the right to assign its rights and
27 obligations under the STA, as amended, to its sales subsidiary QTI. The STA Assignment
28 Agreement also included a provision requiring Apple to forego any financial benefit from an

1 exhaustion ruling, indicating that Qualcomm always understood that its royalty practices
2 unlawfully violate the doctrine of patent exhaustion. Qualcomm required Apple to pay Qualcomm
3 – through its contract manufacturers – the same amount of royalties regardless of the outcome of
4 an exhaustion ruling, further dis-incentivizing Apple from challenging Qualcomm’s practices that
5 violate the exhaustion doctrine.

6 116. Qualcomm has also attempted to evade the patent exhaustion doctrine by selling
7 modem chips to Apple’s contract manufacturers through QTC, which is operated by QTI, which
8 is, in turn, a wholly-owned subsidiary of Qualcomm. This is nothing more than a corporate shell
9 game. In its press release announcing the corporate restructuring of QTC, Qualcomm admitted
10 that any change in its corporate structure would not result in “any change to the way in which it
11 defines its operating segments for financial reporting purposes.” Press Release, *Qualcomm*
12 *Institutes New Corporate Structure*, Qualcomm (Oct. 1, 2012), available at
13 [https://www.qualcomm.news/releases/2012/10/01/qualcomm-implements-new-corporate-](https://www.qualcomm.news/releases/2012/10/01/qualcomm-implements-new-corporate-structure)
14 [structure.](https://www.qualcomm.news/releases/2012/10/01/qualcomm-implements-new-corporate-structure)

15 117. On May 17, 2017, in retaliation for Apple’s lawsuit against it, Qualcomm sued
16 each of Apple’s contract manufacturers who manufacture Apple’s iPhones and iPads for royalty
17 payments that Qualcomm claims are due under its license agreements with the contract
18 manufacturers (even though Qualcomm knows those payments are passed through to Apple).
19 Qualcomm has now moved for a preliminary injunction, seeking to force the contract
20 manufacturers to pay royalties to Qualcomm prior to a resolution of the ongoing litigation
21 between Apple and Qualcomm.

22 **E. Qualcomm Has Monopoly and Market Power in Relevant Markets.**

23 118. The relevant geographic market is worldwide. There are no material geographic
24
25 barriers to competition for modem chip sales and the cellular devices that incorporate those
26 modem chips.

1 119. The relevant product markets are (1) modem chips that comply with CDMA
2 standards²⁴ (“CDMA modem chips”) and (2) modem chips that comply with advanced LTE
3 standards (“premium LTE modem chips.”). As set forth above, Qualcomm has monopoly power
4 with respect to CDMA chips and premium LTE chips. Direct evidence of this power includes,
5 among other things, evidence of Qualcomm’s ability to use threatened loss of access to chips to
6 extract supra-FRAND royalties on mobile devices incorporating its own chipsets or the chipsets
7 of its competitors.

8 120. Qualcomm’s monopoly and market power is also established through
9 circumstantial evidence, including dominant shares of relevant market with substantial barriers to
10 entry. Chips without CDMA functionality are not close enough substitutes to prevent Qualcomm
11 from raising all-in prices for CDMA processors. Similarly, chips without premium LTE
12 functionality are not close enough substitutes to prevent Qualcomm from raising all-in prices for
13 premium LTE processors. Barriers to entry in such markets are significant, including the need to
14 make substantial, costly, and time-consuming investments in technology R&D; the need to
15 develop ongoing customer relationships with leading OEMs; certification requirements imposed
16 by network operators; and barriers to entry that Qualcomm itself has erected with its
17 anticompetitive scheme, including the effective tax that Qualcomm imposes on the chip sales of
18 competitors and potential competitors and Qualcomm’s refusal to license its FRAND-
19 encumbered SEPs to competitors.

20 121. Qualcomm’s demand for a royalty rate based on the entire wholesale price of the
21 phone or tablet is also evidence of its unlawful exercise of monopoly power, when compared to
22 other technology companies whose business model depends on licensing SEPs. ARM Holdings
23 (“ARMH”) holds a large number of SEPs related to the 802.11 wireless standards, which is
24 incorporated into a wide variety of devices that have wireless networking features. But unlike
25 Qualcomm, ARMH charges a royalty rate based on the price of the specific chips that rely on
26 ARMH’s SEPs.

27 _____
28 ²⁴ The relevant CDMA standards include CMDAone and cdma2000.

1 122. For example, Marvell, a modem chip supplier, uses ARMH's SEPs in wifi chips it
2 produces that are incorporated into the Microsoft Xbox. ARMH charges a 1% royalty rate that is
3 calculated off the price of Marvell's chips, rather than the cost of the overall Xbox product.
4 Qualcomm, by comparison, charges a royalty rate of as much as 5% based on the overall
5 wholesale cost of a device, which is usually in the hundreds of dollars, even though its chips sell
6 by themselves for between \$10-20. Qualcomm's anticompetitive practice causes overcharges to
7 OEMs (and ultimately consumers) who offer feature-rich phones or tablets at higher selling
8 prices. Further, Qualcomm's as much as 5% royalty rate is itself evidence of its anticompetitive
9 behavior. Had Qualcomm abided by its FRAND obligations, its royalty rate would have declined.
10 For example, Qualcomm's contribution to the SEPs applicable to cellular devices has declined
11 over time, as devices today contain numerous features that are unrelated to cellular network
12 connectivity (which Qualcomm's patents read on). Thus, Qualcomm's SEPs contribute far less to
13 the value of a 2017 phone than they did to the value of a 2006 phone. Nonetheless, Qualcomm
14 continues to collect a standard 5% royalty from the total value of the device today for
15 Qualcomm's cellular communications SEPs, just as Qualcomm did a decade ago.

16 123. By contrast, while Apple's four other largest direct licensors for wireless
17 communications SEPs hold a significantly higher percentage of 4G SEPs than Qualcomm's self-
18 declared 23.5%, Qualcomm's anticompetitive practices allow it to charge Apple higher royalties
19 than the other four companies combined.

20 124. Qualcomm received approximately 2% of total worldwide cell phone sales in
21 royalties in 2013 and 2014, collecting licensing revenues of approximately \$7.8 billion. Four
22 other companies with similar SEP portfolios—Alcatel-Lucent, Ericsson, InterDigital, and
23 Nokia—collected a combined total royalty rate of only approximately 0.7% of total cell phone
24 sales and \$2.7 billion in licensing revenue.

25 125. Qualcomm's anticompetitive conduct directly injures consumers in product
26 markets for cellular devices like smartphones and tablets that incorporate modem chips.
27 Qualcomm's anticompetitive practice means that the all-in price of any modem chip now consists
28

1 of (i) price paid by the OEM for the modem chip itself; (ii) a FRAND royalty, which the OEM
2 must pay to Qualcomm to practice Qualcomm's SEPs; and (iii) an added surcharge, which the
3 OEM must pay to Qualcomm in order to ensure continued access to Qualcomm's modem chips
4 supply.

5 126. The inflated all-in cost of a modem chip raises the prices consumers pay for
6 cellular devices incorporating modem chips.

7 127. The cellular device product market is inextricably intertwined with the CDMA and
8 premium-LTE chip markets, as shown by the fact that (1) Qualcomm uses its market power in
9 chips to extract anticompetitive licensing terms for its SEPs, (2) such licensing terms include
10 charging a separate royalty as a percentage of the wholesale price of the cellular device rather
11 than the chip, and (3) such a royalty directly inflates the price of cellular devices purchased by
12 consumers like Plaintiffs and other members of the putative Class.

13 **F. Qualcomm Fraudulently Concealed its Anticompetitive Conduct and**
14 **Plaintiffs Could Not Reasonably Have Discovered It Earlier.**

15 128. Qualcomm fraudulently concealed its anticompetitive conduct, including its failure
16 to abide by its FRAND commitments, its "no-license-no-chips" policy, and its anticompetitive
17 and exclusionary agreements with Apple. Plaintiffs could not reasonably have discovered
18 Qualcomm's unlawful and anticompetitive conduct under state and federal antitrust laws until the
19 FTC and Apple filed suit against Qualcomm this year.

20 129. As described above, Qualcomm made public commitments to license its cellular
21 SEPs on FRAND terms. And yet, Qualcomm hid from the public for years to come that it was
22 doing just the opposite.

23 130. Beginning as early as 2011, Qualcomm entered into confidential licenses with
24 specific Apple contract manufacturers. Apple alleges that "Qualcomm uses these secret licenses
25 to conceal its anticompetitive licensing practices." Apple explains that "Qualcomm knows that
26 Apple is shouldering the entire royalty burden, but by licensing the contract manufacturers and
27 not Apple, Qualcomm can demand higher royalties because the contract manufacturers have no
28

1 incentive or power to negotiate, given the pass-through to Apple and the contract manufacturers’
2 critical need for access to Qualcomm’s chipsets for their business.” According to Apple,
3 Qualcomm insists that these agreements are confidential—even Apple has not seen or reviewed
4 them, and certainly consumers like Plaintiffs did not have access to them. And while the contract
5 manufacturers requested permission to share the license agreements with Apple, Qualcomm
6 refused to grant its consent.

7 131. Qualcomm also took additional affirmative steps to keep its anticompetitive
8 conduct secret and affirmatively mislead the public. Apple alleges that as a condition of giving
9 Apple even partial relief from its non-FRAND royalties, Qualcomm sought to gag Apple and
10 prevent it from bringing its concerns to law enforcement or challenging Qualcomm’s compliance
11 with FRAND commitments. Apple alleges that through the second paragraph of Section 7 of the
12 BCPA with Apple, Qualcomm conditioned the BCPA payments on a provision that restricted
13 Apple from initiating or inducing certain legal actions in three particular identified areas:
14 (a) assertion of patents against Qualcomm; (b) claims that Qualcomm failed to offer a license to
15 its SEPs on FRAND terms; and (c) claims that Qualcomm’s patent rights were exhausted. While
16 the BCPA carved out an acknowledgement that Apple had a responsibility to respond to
17 enforcement agencies’ requests for information, in restraining Apple from initiating actions or
18 bringing concerns to law enforcement, Qualcomm conditioned billions of dollars on Apple’s
19 silence before courts and regulators about Qualcomm’s business practices. Even now, Qualcomm
20 is interpreting that agreement to retaliate against Apple for responding to requests for information
21 about Qualcomm’s practices from competition agencies, inhibiting law-enforcement review of
22 Qualcomm’s anticompetitive practices.

23 132. As Apple has alleged in its own lawsuit, “[i]n at least one such agreement,
24 Qualcomm inserted a gag order that prevented an aggrieved party from seeking relief that could
25 curb Qualcomm’s illegal conduct, in an effort to keep courts and regulators in the dark and its
26 coerced customers quiet.”²⁵ Apple further alleges that Qualcomm offered it a bribe of “nearly \$1

27 ²⁵ Apple FAC ¶ 1.
28

1 billion” if Apple “retracted and corrected its statements to government agencies and instead gave
2 false testimony favorable to Qualcomm.”²⁶

3 133. Plaintiffs did not have actual or constructive knowledge of Qualcomm’s
4 anticompetitive behavior and acted diligently in bringing this lawsuit shortly after Qualcomm’s
5 exclusionary agreement with Apple, non-FRAND licensing, and “no-license-no-chips” policy
6 came to light through the FTC’s complaint filed earlier this year.

7 134. For the same reasons, Plaintiffs did not discover—and could not reasonably have
8 discovered—Qualcomm’s anticompetitive conduct (and thus their state-law claims under
9 California law) until the FTC’s complaint was filed earlier this year. Although Korean and
10 Chinese competition authorities had investigated Qualcomm’s actions earlier, Plaintiffs could not
11 reasonably have known that Qualcomm was committing the antitrust violations alleged herein in
12 the United States until the FTC complaint was filed this year.

13 135. As a result, any otherwise applicable statute of limitations is equitably tolled under
14 the doctrine of delayed discovery dating back to at least February 11, 2011.

15 136. As a result, the class period in this case dates back at least to February 11, 2011,
16 notwithstanding any shorter limitations period that might otherwise apply.

17 **G. Qualcomm’s Conduct Has Harmed Competition in the Relevant Markets and**
18 **Caused Consumers to Pay Supracompetitive Prices for Cellular Devices.**

19 137. As alleged by the FTC, “Qualcomm’s anticompetitive practices have excluded
20 competitors, suppressed innovation, and increased consumer prices.”²⁷

21 138. By raising OEMs’ all-in cost of using competitors’ chips, Qualcomm’s conduct
22 has diminished OEMs’ demand for such processors, reduced competitors’ sales and margins, and
23 diminished competitors’ ability and incentive to invest and innovate.

24 139. Several former competitors of Qualcomm have sold off or shut down their chip
25 businesses, unable to achieve sales volumes and margins needed to sustain a viable business.

26 ²⁶ *Id.* at ¶ 231-32.

27 ²⁷ *See* FTC Comp. ¶ 135.

1 While Intel and MediaTek have remained in the business, these firms have felt significant
2 pressure, including on chip margins.

3 140. Qualcomm's practices also suppress innovation, including by foreclosing
4 competing modem chip suppliers and by demanding what amounts to a royalty-free cross-license
5 from its OEM customers, which reduces incentives for such OEMs to innovate.

6 141. Qualcomm's demand that OEMs license its entire patent portfolio prevents OEMs
7 from determining whether or not specific Qualcomm patents actually need to be licensed—either
8 because the OEM product does not actually infringe or the patent is invalid. Qualcomm has
9 resisted attempts by OEMs to license its specific SEPs on FRAND terms. In April 2016, Apple
10 attempted to license the specific patents that Qualcomm considered to be SEPs for the 3G and 4G
11 standards. Qualcomm refused to negotiate over specific patents and removed from its website the
12 list of patents that it had disclosed to ETSI as SEPs for the 3G and 4G standards.

13 V. ANTITRUST INJURY AND CAUSATION

14 142. As a direct, proximate, and reasonably foreseeable result of Qualcomm's conduct,
15 Plaintiffs and Class members were injured in the form of paying artificially-high, supra-
16 competitive prices for cellular devices incorporating modem chips. But for Qualcomm's
17 anticompetitive conduct, Plaintiffs and the Class would have paid less for their cellular devices
18 (and/or would have received cellular devices of higher quality or with more features for the same
19 price).

20 143. As alleged above, Qualcomm used its anticompetitive "no-license-no-chips"
21 policy, its *de facto* exclusive dealing arrangement with Apple, and its refusal to license its patents
22 to competitors to coerce acceptance of non-FRAND licensing rates and terms for its SEPs. The
23 result is an inflated "all in" price for any modem chip which consists of (i) the price the OEM
24 pays for the modem chip itself; (ii) a FRAND royalty, which the OEM must pay to Qualcomm to
25 practice Qualcomm's SEPs; and (iii) an added surcharge, which the OEM must pay to Qualcomm
26 in order to ensure continued access to Qualcomm's modem chips supply. The artificially inflated
27 all-in cost for modem chips in turn resulted directly in increases for the price of cellular devices
28

1 that use those chips. It was, and is (and will be unless Qualcomm is enjoined from continuing to
2 do so), Plaintiffs and the millions of members of the Class who bore, and bear (and will continue
3 to bear), the brunt of Qualcomm's unlawful conduct.

4 144. The supra-competitive all-in modem chip prices, including the surcharge, were
5 passed down the distribution chain from the modem chip purchasers to Plaintiffs and the Class
6 members who use the cellular devices containing such chips. Put simply, Qualcomm unlawfully
7 overcharged OEMs, which passed on the unlawful overcharge – directly or through distributors
8 and retailers – to the end-purchasers of cellular devices: Plaintiffs and the Class. Thus, the
9 unlawful flow of dollars from the Class to Qualcomm can be directly traced through a
10 straightforward distribution chain.

11 145. Qualcomm's anticompetitive conduct in the chip market includes extracting a
12 surcharge in the form of a non-FRAND royalty tied to the entire wholesale price of the cellular
13 devices at issue in this litigation. The surcharges on the modem chips and paid by OEMs were in
14 turn passed on to consumers. As a result, Qualcomm's anticompetitive acts, as alleged herein,
15 directly distorted and increased the price of the cellular devices paid by Plaintiffs.

16 146. As noted above, Qualcomm admits that “[r]oyalties are generally based upon a
17 percentage of the wholesale (*i.e.*, a licensee's) selling price of complete licensed products, net of
18 certain permissible deductions” Qualcomm's anticompetitive conduct in the chip market,
19 including its surcharge based on licensing a percentage of the wholesale price of devices, are
20 inextricably intertwined with the cellular devices themselves. The effect of Qualcomm's
21 anticompetitive conduct in this case is targeted at the cellular devices as a whole rather than
22 merely their components, as reflected by the fact that Qualcomm's anticompetitive licensing
23 policy uses a royalty base that is the price of the cellular device as a whole.

24 147. Additionally, Qualcomm's coercive agreements with OEMs such as Apple
25 impacted consumer directly, as they purchased cellular devices from OEMs subject to such
26 anticompetitive arrangements.

1 148. The all-in cost of modem chips, including the royalties and surcharge paid by
2 OEMs to preserve their chip supply, make up a substantial portion of the cost of manufacturing
3 cellular devices. The retail price of a device is determined in substantial part by these all-in costs.

4 149. As a result, the inflated prices of cellular devices resulting from Qualcomm's
5 anticompetitive practices have been passed on to Plaintiffs and other members of the proposed
6 Class by OEMs, distributors, and retailers.

7 150. OEMs, cellular device designers, network carriers, and retailers are generally
8 subject to vigorous price competition, and generally operate on thin margins; they do not readily
9 absorb the anticompetitive rates Qualcomm charges for its modem chips, including the unlawful
10 royalties Qualcomm demands that are based on a percentage of the cost of the device itself. Any
11 increase in the all-in price for modem chips – which consists of 1) the price of the modem chip;
12 and 2) any patent royalties that the OEM must pay for using that chip in a cellular device, lead to
13 corresponding price increases at all levels of the distribution chain. The surcharge resulting from
14 Qualcomm's anticompetitive conduct results in an increased cost for the cellular device as a
15 whole, which is directly passed on to the consumer.

16 151. Economic theory teaches that the only situations in which precisely zero pass-
17 through occurs is when an industry faces a perfectly elastic demand for its product, or if supply
18 was perfectly inelastic. These possibilities are considered implausible by economists. Either
19 scenario is at odds with the nature of the cellular device industry and market. Existing empirical
20 studies of the electronics industry have concluded that demand for cellular devices is not
21 infinitely elastic. Therefore, at least a partial pass-through of an increase in the all-in costs of
22 modem chips, including the patent royalties that OEMs must pay to use modem chips in their
23 cellular devices and price of the chip itself, into the price of finished cellular devices – and
24 consequent harm to Plaintiffs and members of the Class – is the predicted outcome of
25 Qualcomm's anticompetitive behavior.

26 152. As Professor Jeffrey K. MacKie-Mason notes:

27 As is well known in economic theory and practice, at least some of the
28 overcharge will be passed on by distributors to end consumers. When the

1 distribution markets are highly competitive, as they are here, all or nearly the
2 entire overcharge will be passed on through to ultimate consumers. . . . This
3 general phenomenon of cost pass through is well-established in antitrust laws
4 and economics as well.²⁸

5 153. To the extent that distributors, wholesalers, and retailers selling to consumers or to
6 others in the distribution chain price their sales as their cost plus a fixed markup, this will create
7 an additional reason for pass-through to exceed 100 percent through these channels. For example,
8 if a wholesaler prices its product at the manufacturer's sales price plus 10 percent, and a retailer
9 prices its product at wholesale plus 10 percent, the total pass through to the final consumer will be
10 121 percent (*i.e.*, 110 percent times 110 percent) of the manufacturer's sales price. Further,
11 because retailers ultimately compete with direct sales to purchasers by OEMs, competitive forces
12 would likely work to equalize end-purchaser prices between channels, after controlling for the
13 value of differences in support across different distribution channels. This would tend to push the
14 total pass-through rate from costs to end-purchaser pricing above 100 percent, since
15 manufacturers could not sustain a pricing policy to distributors that did not cover their costs, and
16 an additional fixed markup on top of distributor costs would result in a total pass-through rate to
17 final consumers in excess of 100 percent. Based on economic theory and published studies in this
18 area, it is likely that the pass-through rates for the inflated all-in costs of Qualcomm's modem
19 chips (including related SEP licensing and royalty rates) incorporated into cellular devices will
20 exceed 100 percent, a situation known as "overshifting."

21 154. Apple confirms this economic theory: Qualcomm's anticompetitive contractual,
22 licensing, and royalty rates are passed on to consumers in the form of higher prices for cellular
23 devices. The passing on to consumers of the improper royalties demanded from Apple by
24 Qualcomm is "inevitable."²⁹

25 155. In sum, Qualcomm's coercive combinations caused the following relevant
26 anticompetitive effects:

27 ²⁸ Order re: Class Certification, at 13-14, *Coordination Proceedings Special Title (Rule 1550(b))*
Microsoft I-V Cases, J.C.C.P. No. 4106 (San Francisco Super. Ct. Aug. 29, 2000).

28 ²⁹ Apple FAC ¶ 659.

- 1 • Price competition for the modem chips incorporated into cellular devices has been
2 restrained;
- 3 • Price competition for cellular devices themselves has been restrained;
- 4 • Cellular device prices have been raised to artificially-inflated supra-competitive levels;
- 5 • Plaintiffs and members of the Class have been deprived of free and open competition
6 in the markets for chips and the cellular devices that incorporate them; and
- 7 • Plaintiffs and members of the Class paid artificially-inflated, supra-competitive prices
8 for cellular devices that incorporate modem chips.

9 156. By reason of Qualcomm’s anticompetitive conduct, Plaintiffs and members of the
10 Class have sustained injury to their businesses or property, having paid higher prices for cellular
11 devices incorporating modem chips than they would have paid in the absence of Qualcomm’s
12 illegal contracts, combinations, or conspiracies, and as a result have suffered damages. This is an
13 antitrust injury of the type that the antitrust laws were meant to punish and prevent.

14 **VI. CLASS ACTION ALLEGATIONS**

15 157. Plaintiffs bring this case on behalf of themselves and as a class action under
16 Federal Rule of Civil Procedure 23(b)(2) and 23(b)(3) on behalf of all members of the following
17 Class (the “Nationwide Class”):

18 All natural persons and entities in the United States who purchased, paid for,
19 and/or provided reimbursement for some or all of the purchase price for all
20 UMTS, CDMA (including CDMAone and cdma2000) and/or LTE cellular
21 devices (“Relevant Cellular Devices”) for their own use and not for resale from
22 February 11, 2011, through the present (the “Class Period”) in the United States.
23 This class excludes (a) Defendant, its officers, directors, management, employees,
24 subsidiaries, and affiliates; (b) all federal and state governmental entities; (c) all
25 persons or entities who purchased Relevant Cellular Devices for purposes of
26 resale; and (d) any judges or justices involved in this action and any members of
27 their immediate families or their staff.

28 158. Plaintiffs do not currently know the exact number of the members of the Class, but
believe that they number in the millions. Joinder of all Class members before this Court would be
impracticable.

1 159. Common questions of law and fact exist as to all members of the Class and
2 predominate over any individualized issues or questions. Such common questions of law and fact
3 include but are not limited to:

- 4 (a) Whether Qualcomm possessed monopoly power over CDMA and premium
5 LTE chips during the Class Period;
- 6 (b) Whether Qualcomm willfully acquired or maintained monopoly power over
7 the CDMA and premium LTE chips during the Class Period;
- 8 (c) Whether Qualcomm unlawfully tied the sale of its modem chips to the
9 licensing of its intellectual property (including SEPs and non-SEPs);
- 10 (d) Whether Qualcomm unlawfully tied the licensing of SEPs with the licensing of
11 non-SEPs;
- 12 (e) Whether Qualcomm unlawfully coerced purchasers of its modem chips to
13 adhere to anticompetitive sales terms;
- 14 (f) Whether Qualcomm unlawfully coerced licensees of its SEPs to adhere to
15 anticompetitive licensing terms;
- 16 (g) Whether Qualcomm violated a duty to deal in refusing to license its FRAND
17 encumbered SEPs to modem chip competitors;
- 18 (h) Whether Qualcomm extracted unlawful royalty payments from purchasers of
19 modem chips (and their downstream customers) who incorporated the chips
20 into finished cellular devices;
- 21 (i) Whether Qualcomm's SEPs for the relevant cellular communications standards
22 are fully embodied within Qualcomm's modem chips such that Qualcomm's
23 rights in the patents are exhausted when Qualcomm sells its chips;
- 24 (j) Whether Qualcomm's agreements related to the sale of its chips constitute
25 unlawful combinations in restraint of trade or commerce;
- 26 (k) Whether Qualcomm's agreements to license its SEPs constitute unlawful
27 combinations in restraint of trade or commerce;
- 28

- 1 (l) Whether Qualcomm’s unlawful conduct enabled Qualcomm to increase,
2 maintain, or stabilize above competitive levels the prices it charges for patent
3 licenses on its cellular SEPs and the all-in modem prices it charges for its
4 UMTS, CDMA and LTE chips;
- 5 (m) Whether the inflated prices were passed on to Class members;
- 6 (n) Whether Qualcomm violated section 1 of the Sherman Act, 15 U.S.C. § 1;
- 7 (o) Whether Qualcomm’s acquisition and maintenance of its monopoly in the
8 CDMA and premium-LTE chip markets violated Section 2 of the Sherman
9 Act;
- 10 (p) Whether Qualcomm violated California’s Cartwright Act, Cal. Bus. &
11 Professions Code § 16700, *et seq.*;
- 12 (q) Whether Qualcomm violated section 5 of the Federal Trade Commission Act,
13 15 U.S.C. § 45;
- 14 (r) Whether Qualcomm violated California’s Unfair Competition Law, Cal. Bus.
15 & Professions Code § 17200, *et seq.*;
- 16 (s) Whether Qualcomm caused members of the Class to pay artificially-high,
17 supra-competitive prices for cellular devices, and thus suffer antitrust injury,
18 when Qualcomm: (1) unlawfully decreased and eliminated competition in the
19 market for modem chips, (2) charged artificially-high, supra-competitive prices
20 for its modem chips, (3) required artificially-high, supra-competitive rates to
21 license its cellular SEPs, (4) refused to license its SEPs to other chips
22 competitors, despite FRAND obligations to do so; and (5) required OEMs to
23 pay non-FRAND royalties to Qualcomm;
- 24 (t) The effect of Qualcomm’s conduct on the price of cellular devices containing
25 modem chips sold in the United States and its territories during the Class
26 Period;
- 27
28

- 1 (u) Whether Qualcomm’s conduct caused injury to the business or property of
- 2 Plaintiff and members of the Class;
- 3 (v) Whether Qualcomm unjustly enriched itself to the detriment of the Plaintiff
- 4 and members of the Class, thereby entitling Plaintiff and members of the Class
- 5 to disgorgement of all benefits derived by Qualcomm;
- 6 (w) The appropriate form and scope of injunctive relief necessary to prohibit
- 7 further and future injury to members of the Class from Qualcomm’s
- 8 anticompetitive conduct;
- 9 (x) The appropriate measure and amount of damages sufficient to compensate the
- 10 Class for its injuries suffered because of Qualcomm’s anticompetitive conduct;
- 11 and
- 12 (y) The nature, form, and amount of the equitable relief necessary to restore the
- 13 inequities now existing in Qualcomm’s favor and at the Class’ detriment
- 14 caused by Qualcomm’s anticompetitive, unlawful, and unfair conduct and
- 15 business practices.

16 160. Plaintiffs’ claims are typical of the claims of the members of the Class. Plaintiffs
17 purchased cellular devices incorporating modem chips during the Class Period for their own use
18 and not for resale. In that they paid artificially-inflated, supra-competitive prices for cellular
19 devices incorporating modem chips, Plaintiffs suffered similar injuries to all Class members,
20 caused by the same course of unlawful, unfair and anticompetitive conduct committed by
21 Qualcomm. Therefore, Plaintiffs’ interests are coincident with and not antagonistic to the claims
22 of all members of the Class.

23 161. Plaintiffs will fairly, adequately and vigorously represent the interests of the Class
24 in prosecuting their claims against Qualcomm. Plaintiffs are represented by counsel who are
25 competent and experienced in the prosecution of antitrust, intellectual property and class action
26 litigation.

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1 162. The questions of law and fact common to members of the Class predominate over
2 any questions affecting only individual members, including any individual legal and factual issues
3 relating to liability and damages.

4 163. Class action treatment is superior compared to any alternative method for the fair
5 and efficient adjudication and resolution of the claims and controversies presented by this
6 Complaint because, among other things, such treatment will permit a large number of similarly-
7 situated persons to prosecute their common claims in a single forum simultaneously, efficiently,
8 and without the unnecessary duplication of evidence, effort, and expense that numerous
9 individual actions would engender. The benefits of proceeding through the class mechanism,
10 including providing injured persons or entities with a method for obtaining redress for claims that
11 might not be practicable to pursue individually, substantially outweigh any difficulties that may
12 arise in management of this class action. The prosecution of separate actions by individual
13 members of the Class would create a risk of inconsistent or varying adjudications establishing
14 incompatible standards of conduct for Qualcomm.

15 164. This case is also appropriate for certification as a class action because Qualcomm
16 has acted and refused to act on grounds generally applicable to the Class, so that final injunctive
17 relief will be appropriate with respect to the Class as a whole.

18 **VII. APPLICATION OF CALIFORNIA LAW TO THE NATIONWIDE CLASS**

19 165. Certification of the nationwide Class, which seeks treble damages as well as
20 injunctive and equitable relief under California's Cartwright Act and Unfair Competition Law, is
21 proper in this case. California is the world's sixth largest economy and the home of Silicon
22 Valley. Companies like Apple, Google and Intel have transformed the world through their
23 inventions and created hundreds of thousands of jobs both on their own and through the
24 companies that have grown as a result of the products that they have developed. California has a
25 strong interest in insuring the continued development of its economy by protecting against
26 anticompetitive conduct. California also has a strong government interest in protecting consumers
27 from unfair and unlawful business emanating from California and conducted by companies with
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1 their principal place of business in California. Each member of the Class could bring an action in
2 their individual capacity against Qualcomm in a California court (state or federal) for violations
3 of California’s Cartwright Act and Unfair Competition Law, based on the same operative facts
4 alleged by Plaintiffs in this Complaint, regardless of where the Class member purchased a cellular
5 device or suffered injury caused by Qualcomm. The application of California law to claims
6 against Qualcomm based on purchases that occurred outside of California would not violate the
7 Due Process Clause of the United States Constitution. Qualcomm’s anticompetitive and
8 conspiratorial conduct occurred in California, and the connection between such conduct and
9 California is not merely “slight and casual” or *de minimis*.

10 166. Qualcomm is a citizen of California, with its principal place of business in San
11 Diego, California, subject to general jurisdiction in all courts located within the State of
12 California. California was the nexus of Qualcomm’s unlawful and anticompetitive business
13 practices alleged in this Complaint. Qualcomm devised its anticompetitive scheme in California,
14 negotiated its anticompetitive licenses in California, extracted unlawful royalty payments from a
15 cellular device designer and distributor in California, made anticompetitive business decisions in
16 California, and extracted unlawful profits in California. Qualcomm’s largest customer for its
17 modem chips—Apple—is headquartered in California. Google, the creator of the Android
18 operating system used in almost all non-Apple smartphones and tablets, is headquartered in
19 California. Qualcomm’s largest remaining competitor in the modem chip manufacturing
20 business—Intel—is headquartered in California. Qualcomm’s chips were contained in, and
21 Qualcomm’s intellectual property was embodied in, millions of cellular devices that were sold in
22 California, which California sales were foreseen by Qualcomm. Qualcomm’s unreasonable
23 licensing demands of Apple alleged above were made during in-person meetings at Qualcomm’s
24 offices in San Diego, California. Qualcomm has filed suit against Apple’s contract manufacturers
25 in the U.S. District Court for the Southern District of California, Case No. 3:17-cv-01010-GPC-
26 MDD and last week, against Apple for patent infringement, Case No. 3:17-cv-01375-JAH-AGS.

1 And Qualcomm's contracts with its customers contain choice-of-law provisions selecting the
2 application of California law.

3 167. The State of California has a clear, substantial, legitimate, and compelling interest
4 in protecting competition in California and entertaining claims by all victims of Qualcomm's
5 unlawful and anticompetitive conduct that emanated from within California's borders, not only
6 those by California residents, and not only those by persons who purchased their Devices within
7 the State.

8
9 **FIRST CLAIM FOR RELIEF**

10 **Violation of the Cartwright Act (Cal. Bus. & Professions Code §§ 16700, *et seq.*)**

11 168. Plaintiffs incorporate by reference the allegations in the above paragraphs as if
12 fully set forth herein.

13 169. Throughout the Class Period, Qualcomm engaged in systematic and continuous
14 conduct with the purpose of (i) unreasonably restricting trade and commerce, and (ii) increasing
15 the price of modem chips, which are a commodity. Qualcomm achieved these anticompetitive
16 purposes by entering into series of coercive combinations for the sale of its modem chips and
17 licensing of its intellectual property. Qualcomm's conduct violated California Business and
18 Professions Code §§ 16700, *et seq.* (the "Cartwright Act").

19 170. The Cartwright Act applies to the anticompetitive, price-fixing, trade-restraining
20 conduct of a single firm in certain circumstances when that firm by coercive conduct, imposes
21 restraints to which distributors involuntarily adhere. If a "single trader" pressures customers into
22 anticompetitive contract terms, including exclusive dealing arrangements or illegal 'tie-ins, an
23 unlawful combination is established with the meaning of the Cartwright Act, irrespective of any
24 monopoly or conspiracy. Stated differently, a "conspiracy" or "combination" within the meaning
25 of the Cartwright Act is formed where a trader uses coercive tactics to impose restraints on
26 uncooperative businesses.

1 171. And this Qualcomm did: it successfully executed a scheme to pressure OEMs to
2 adhere to unreasonable and supra-competitive licensing terms by threatening to withhold chip
3 supply; coerced Apple into exclusive dealing arrangements; and agreed to pay rebates or funds in
4 exchange for OEMs acquiescing to Qualcomm’s coercive terms.

5 172. These arrangements, individually and collectively, were unlawful combinations
6 within the meaning of the Cartwright Act. The effect of these unlawful combinations was to
7 exclude competitors from the modem chip market, reinforce and grow Qualcomm’s dominance
8 and ability to extract anticompetitive profits (a perpetual cycle that will continue unless
9 Qualcomm is enjoined), and – fundamental to this action – cause the price of cellular devices
10 containing modem chips to rise to artificially-high, supra-competitive levels.

11 **Qualcomm’s Leverage and Power to Coerce**

12 173. Qualcomm refuses to license its SEP patents to competitors (an unlawful refusal to
13 deal with competitors per Qualcomm’s FRAND obligations). A FRAND license would give
14 competing modem chip manufacturers (and potential competitors) the right to market and sell
15 authorized, unencumbered, patent-exhausted modem chips. Qualcomm’s refusal to license on
16 FRAND terms eliminates the ability of OEMs to purchase modem chips from Qualcomm’s
17 competitors (or potential competitors) without also paying royalties to Qualcomm. Because they
18 have no viable alternative source of supply for chips – and because of Qualcomm’s unlawful “no-
19 license-no-chips” policy whereby it threatens to disrupt OEMs’ chip supply if they do not comply
20 with Qualcomm’s anticompetitive licensing demands—OEMs have no choice but to adhere to
21 Qualcomm’s unlawful and anticompetitive contract terms, licensing rates, and royalty demands,
22 or face being cut off from their only supply of modem chips (a technology necessary for any
23 cellular device).³⁰

24 174. As Apple puts it: “But-for Qualcomm’s FRAND evasion, Qualcomm would have
25 been forced to offer exhaustive patent licenses to its cellular SEPs on FRAND terms to
26

27 ³⁰ Apple FAC ¶ 108 (“Qualcomm had leverage over Apple because of Qualcomm’s market power
28 in chipsets and its ability to disrupt Apple’s supply of chipsets”).

1 [competitors] Intel, Broadcom, and others. An exhaustive patent license to Qualcomm’s cellular
 2 SEPs would have made these chipset suppliers more effective competitors to Qualcomm in the
 3 chipset market, leading to lower prices . . . to the benefit of Apple and ultimately of
 4 consumers.”³¹ Samsung states things succinctly: “because Qualcomm does not license
 5 competitors, handset manufacturers have no choice but to accept Qualcomm’s onerous terms.”³²

6 175. Qualcomm requires purchasers of its modem chips to adhere to (a) licensing rates
 7 that are much greater than Qualcomm’s contribution to the cellular standard implemented, and (b)
 8 royalty rates based on the entire price of finished cellular devices, that incorporate far more than
 9 Qualcomm’s intellectual property. Qualcomm is able to do so by virtue of its coercive “no-
 10 license-no-chips” policy, whereby it threatens to disrupt OEMs’ chip supply unless they concede
 11 to Qualcomm’s non-FRAND, anticompetitive, and unlawful licensing terms.

12 176. Unless coerced, no purchaser of Qualcomm’s modem chips (or their downstream
 13 customer) or licensee of Qualcomm’s SEPs would agree to such royalty rates untethered to
 14 Qualcomm’s contribution to the cellular devices price. In Apple’s words: “Qualcomm forced
 15 purchasers of its chipsets to take a license to its SEPs at *extortion-level royalties* . . . [and]
 16 threaten[ed] ‘disloyal’ chipset customers with even less-favorable royalties and license terms if
 17 they purchased chipsets from Qualcomm’s competitors[.]”³³ Samsung too confirms that
 18 Qualcomm successfully leveraged its cellular SEPs to coerce OEMs to accept unreasonable
 19 licensing terms that have anticompetitive, trade-restraining effects.³⁴ From Samsung’s
 20 perspective: “Qualcomm coerces handset manufacturers to sign long-term licenses that
 21 disincentivize handset manufacturers from seeking alternative chipset suppliers and enable
 22 Qualcomm to extract monopoly profits from the full handset *whether or not the value is derived*
 23 *from Qualcomm’s SEPs.*”³⁵

24
 25 _____
 31 Apple FAC at ¶ 625.

26 32 Samsung Amicus Br. at 2.

27 33 Apple FAC ¶ 52 (emphasis added).

28 34 Samsung Amici Br. at 7

35 *Id.* at 10.

1 177. Qualcomm also forces upon purchasers of modem chips terms that violate the
2 fundamental principle of patent exhaustion. Qualcomm will not sell modem chips unless the
3 purchaser and certain downstream customers, including cellular device designers and sellers,
4 agree to pay separate and additional royalties and enter Qualcomm licenses at supra-competitive
5 rates.

6 178. In the absence of Qualcomm’s coercion, purchasers of Qualcomm’s modem chips
7 and their downstream customers would not have agreed to Qualcomm’s demands for these kinds
8 of post-exhaustion “royalty” payments to which Qualcomm was not legally entitled.³⁶

9 179. Qualcomm coerced Apple into entering into *de facto* exclusive dealing contracts
10 between at least 2011 and 2016. Under the 2011 TA, Qualcomm agreed to make incentive
11 payments or grant chip discounts to Apple only if Apple agreed to exclusively use Qualcomm
12 chips in all new iPhone and iPad models and would otherwise forfeit all such payments if it used
13 a Qualcomm competitor’s chips. The agreement was modified in 2013 so that it would continue
14 through 2016. Again, pursuant to that agreement, Qualcomm agreed to make substantial incentive
15 payments to Apple, so long as Apple exclusively sourced its chips from Qualcomm. Qualcomm
16 further refused to guarantee Apple a supply of chips, limited its liability for failure to supply
17 chips, and took other actions alleged above that coerced Apple from “switching to Intel or other
18 potential competitors’ chipsets, substantially diminishing competition in the interim”

19 180. As alleged above, Qualcomm’s 2011 and 2013 agreements with Apple were, and
20 were intended by Qualcomm to be, *de facto* exclusive deals that were as effective as express
21 purchase requirements and that essentially foreclosed Qualcomm’s competitors from gaining chip
22 business at Apple, since:

23 a. Apple had at all relevant times an interest in developing and working with
24 additional suppliers of chips;

25 b. The large penalties Apple would face under its agreements with Qualcomm
26 if it sourced chips from another baseband supplier prevented Apple from using

27 ³⁶ It is improper and contrary to the law to leverage a patent beyond its established limits.
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1 alternative suppliers during the effective exclusivity period under these
2 agreements; and

3 c. Although a price-cost test is not required to assess the competitive effects
4 of Qualcomm's agreements with Apple, the penalties under these agreements are
5 sufficiently large that, if they were attributed as discounts to the price of
6 Qualcomm chips reasonably contestable by a Qualcomm competitor, the resulting
7 price of Qualcomm's processors would be below Qualcomm's cost.

8 181. As a result of the exclusivity terms in its agreement with Qualcomm, Apple
9 sourced modem chips exclusively from Qualcomm for all new iPads and iPhone products that it
10 launched over the five-year period from October 2011 through September 2016.

11 182. At all relevant times, Qualcomm intended to form and formed one or more trusts
12 through a combination or conspiracy to accomplish purposes prohibited by and contrary to the
13 public policy of the State of California.

14 183. Qualcomm's actions constitute prohibited restraints on competition in violation of
15 Business and Professions Code §§ 16720, *et seq.* in that the conduct alleged herein restricted trade
16 and artificially inflated and/or maintained prices on CDMA and premium LTE chips and the
17 cellular devices embodying them.

18 184. Qualcomm's *de facto* exclusive dealing arrangement with Apple also violates
19 Business and Professions Code § 16727, which makes it unlawful for "any person to lease or
20 make a sale or contract for the sale of . . . commodities . . . or to fix a price charged therefor, or
21 discount from, or rebate upon, such price, on the condition, agreement or understanding that the
22 lessee or purchaser thereof shall not use or deal in the goods, merchandise, machinery, supplies,
23 commodities, or services of a competitor or competitors of the lessor or seller, where the
24 effect . . . may be to substantially lessen competition or tend to create a monopoly in any line of
25 trade or commerce in any section of the State."

26 185. As a direct result of Qualcomm's unlawful conduct, Plaintiffs and the Class
27 members were overcharged when they purchased cellular devices incorporating modem chips.

1 186. Plaintiffs and other Class members are “persons” within the meaning of the
2 Cartwright Act as defined in California Business and Professions Code § 16702.

3 187. Qualcomm’s conduct violates the Cartwright Act.

4 188. These violations are continuing and will continue unless enjoined by the Court.

5 189. Plaintiffs seek damages as set forth below and in this cause of action on behalf of
6 themselves and all Class members against Qualcomm, including but not limited to an injunction
7 against Defendant preventing and restraining the violations alleged herein.

8 **SECOND CLAIM FOR RELIEF**

9 **Violation of Section 1 of the Sherman Act (15 U.S.C. § 1)**

10 190. Plaintiffs incorporate by reference the allegations in the above paragraphs as if
11 fully set forth herein.

12 191. As detailed above in Plaintiffs’ allegations of Qualcomm’s violation of the
13 Cartwright Act, Qualcomm engages in coercive combinations that restricted trade and commerce
14 among the several States. As with the Cartwright Act, the “conspiracy” or “combination”
15 necessary to support an antitrust action under section 1 of the Sherman Act can be found where a
16 single actor successfully coerces unwilling participants to adhere to agreements that have
17 anticompetitive effects. As fully alleged above, Qualcomm engages in a scheme of coercing
18 others into illegal agreements in restraint of trade which caused Plaintiffs and the Class to pay
19 artificially-high and supra-competitive prices for cellular devices incorporating modem chips.
20 Qualcomm violated section 1 of the Sherman Act.

21 192. Qualcomm, by and through its officers, directors, employees, agents or other
22 representatives, has entered into unlawful agreements and combinations in restraint of trade, in
23 violation of 15 U.S.C. § 1. Such agreements include Qualcomm’s anticompetitive agreements
24 with Apple in 2011 and 2013; agreements with OEMs pursuant to Qualcomm’s “no-license-no-
25 chips” policies, through which Qualcomm exacts anticompetitive, non-FRAND royalties from
26 OEMs based on the wholesale price of cellular devices; and rebates or return of funds conditioned
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1 on the acceptance of Qualcomm's preferred licensing terms. Such conduct is actionable under the
2 private attorney general provisions for civil litigants under the Clayton Act.

3 193. These conspiratorial acts, combinations, and agreements have caused unreasonable
4 restraints in the markets for modem chips, without countervailing and offsetting pro-competitive
5 benefits.

6 194. Plaintiffs and the other Class members have been harmed by injury to competition
7 in these markets and by being forced to pay inflated prices for cellular devices which incorporate
8 the modem chips.

9 195. These violations are continuing and will continue unless enjoined by the Court.

10 196. Plaintiffs seek damages and injunctive relief as set forth below and in this cause of
11 action on behalf of themselves and all Class members against Qualcomm, including but not
12 limited to an injunction against Defendant preventing and restraining the violations alleged
13 herein.

14 **THIRD CLAIM FOR RELIEF**

15 **Violation of Section 2 of the Sherman Act (15 U.S.C. § 2)**

16 197. Plaintiffs incorporate by reference the allegations in the above paragraphs as if
17 fully set forth herein.

18 198. Qualcomm's conduct, as alleged herein, constitutes unlawful monopolization of
19 the market for CDMA and premium-LTE modem chips, in violation of Section 2 of the Sherman
20 Act, 15 U.S.C. § 2.

21 Qualcomm has monopoly power in the CDMA and premium-LTE chip markets. First, it has
22 maintained high and durable market shares in these markets, historically controlling over 80% of
23 both markets. Second, there are substantial barriers to entry. CDMA and premium LTE based
24 technology is not interchangeable with or substitutable for other technologies, and adherents of
25 such technologies have become locked-in. Qualcomm also controls the SEPs underlying CDMA
26 technology, and Qualcomm has maintained this monopoly by, among other things, refusing to
27 license to competitors and requiring purchasers of its chips to agree to license its patent portfolio.
28

1 Third, Qualcomm's monopoly power is shown by its demonstrated ability to force OEMs to
2 accept one-sided, unreasonable supply terms. Among other things, Qualcomm has used its control
3 over the CDMA chip supply to require purchasers to agree to its license agreements and related
4 terms, including non-FRAND royalty terms.

5 199. Qualcomm has acquired and maintained its market power described above through
6 anticompetitive means – among other things, excluding competitors and forcing OEMs to agree
7 to non-FRAND terms.

8 200. Qualcomm's market power over CDMA and premium-LTE chips allows it to
9 inflate the price of modem chips by including in them a surcharge, which in turn increases the
10 price of the cellular devices containing those modem chips.

11 201. There is no procompetitive justification for the anticompetitive conduct in which
12 Qualcomm has engaged. Qualcomm has abused its monopoly power in the relevant chips markets
13 to force OEMs into licenses with unfair and unreasonable terms, including, but not limited to,
14 excessively high royalty rates based on the selling price of the completed device rather than the
15 value of Qualcomm's contribution to the technology in that device. Qualcomm's acts have
16 harmed the development of modem chips, as it has forced out competitors, thus reducing
17 innovation and competitive pricing.

18 202. Plaintiffs and Class members were harmed by Qualcomm's conduct, which
19 increased the purchase price of their cellular devices incorporating modem chips. Additionally,
20 Qualcomm's conduct harmed innovation and foreclosed competition, which harmed Plaintiffs and
21 Class members in the quality and price of their cellular devices incorporating modem chips.
22 These violations are continuing and will continue unless enjoined by the Court. Plaintiffs seek
23 the relief set forth below and in this cause of action on behalf of themselves and all Class
24 Members against Qualcomm, including but not limited to an injunction against Defendant
25 preventing and restraining the violations alleged herein.

FOURTH CLAIM FOR RELIEF

Violation of Unfair Competition Law (Cal. Bus. & Prof. Code §§ 17200, *et seq.*)

203. Plaintiffs incorporate by reference the allegations in the above paragraphs as if fully set forth herein.

204. Qualcomm’s conduct constitutes a violation of California’s Unfair Competition Law, Cal. Bus. & Prof. Code §§ 17200, *et seq.*, which protects consumers from unlawful, fraudulent, and unfair business practices.

205. Plaintiffs bring this claim on behalf of themselves, members of the Class, and on behalf of the public as private attorneys general pursuant to Cal. Bus. & Prof. Code § 17204.

206. Qualcomm’s conduct violates the Sherman Act, the Federal Trade Commission Act, and the Cartwright Act. As such, Qualcomm’s acts also constitute unlawful conduct under section 17200. Qualcomm unlawfully acquired and maintained monopoly over the chip market through anticompetitive conduct, including, among other things, excluding competitors by refusing to license patents to them, engaging in exclusive dealing arrangements with its OEMs to exclude competitors, and forcing OEMs to license its patents on anticompetitive terms.

207. Qualcomm’s conduct was also deceptive because it induced SSOs to use its technology on the promise that Qualcomm would comply with FRAND. But after SSOs selected Qualcomm’s technology for their standards, Qualcomm refused to comply with its FRAND commitments.

208. Qualcomm’s conduct is unfair to Plaintiffs and Class members who, as a direct result of the acts described above, were charged more for their cellular devices than they would have been but for Qualcomm’s anticompetitive conduct.

209. Plaintiffs and Class members seek and are entitled to all forms of relief available under California’s Unfair Competition Law. Pursuant to § 17203, Plaintiffs and Class members seek from Qualcomm restitution and disgorgement of all earnings, profits, compensation, benefits, and other ill-gotten gains obtained by Qualcomm as a result of its conduct in violation of Cal. Bus. & Prof. Code §§ 17200, *et seq.*

1 Dated: June 13, 2018

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