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16 **UNITED STATES DISTRICT COURT**
17 **NORTHERN DISTRICT OF CALIFORNIA**
18 **SAN JOSE DIVISION**

19 IN RE: QUALCOMM ANTITRUST
20 LITIGATION

Case No. 17-md-2773-JSC

**PLAINTIFFS' SECOND AMENDED
CONSOLIDATED CLASS ACTION
COMPLAINT**

DEMAND FOR JURY TRIAL

REDACTED

21
22
23 This Document Relates To:
24 ALL ACTIONS

TABLE OF CONTENTS

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

I. NATURE OF ACTION 1

II. THE PARTIES..... 7

 A. Plaintiffs 7

 B. Defendant 8

III. JURISDICTION AND VENUE 8

IV. FACTUAL ALLEGATIONS 9

 A. Qualcomm Leverages the Standards-Setting Process to Attain a Strategic
 Dominant Position atop the Modem Chipset Industry..... 9

 B. Qualcomm Lures Customers into Acquiescence Through Its Knowingly
 Deceptive and Disingenuous FRAND Commitments..... 11

 C. Qualcomm Has Monopoly Power in the CDMA and Premium LTE Chip
 Markets..... 14

 D. Qualcomm Reinforces Its Stranglehold on the Industry Through Its No-
 License-No-Chips Tying Arrangement..... 14

 E. Qualcomm Refuses to Deal with Its Rivals in Violation of FRAND. 25

 F. Qualcomm’s Exclusivity Agreements with Apple Exacerbate the
 Anticompetitive Effects of Qualcomm’s Conduct..... 32

 G. Qualcomm Has Monopoly and Market Power in Relevant Markets. 42

 H. Qualcomm’s Anticompetitive Conduct Harms Consumers..... 49

 I. Qualcomm Fraudulently Concealed its Anticompetitive Conduct and
 Plaintiffs Could Not Reasonably Have Discovered It Earlier..... 52

V. CLASS ACTION ALLEGATIONS 55

FIRST CLAIM FOR RELIEF

 Violations of the Cartwright Act
 (Cal. Bus. & Prof. Code § 16700 et seq.)..... 58

SECOND CLAIM FOR RELIEF

 Violations of the Unfair Competition Law
 (Cal. Bus. & Prof. Code § 17200 et seq.)..... 62

VI. JURY DEMAND 66

VII. PRAYER FOR RELIEF..... 66

1 Plaintiffs Sarah Key, Andrew Westley, Terese Russell, and Carra Abernathy (“Plaintiffs”),
2 on behalf of themselves and all others similarly situated (the “Class,” as defined below), bring this
3 Second Amended Consolidated Class Action Complaint (“Complaint”) against Defendant
4 Qualcomm Incorporated (“Qualcomm”) for violations of the California Cartwright Act and
5 California Unfair Competition Law, and allege based on personal knowledge with respect to facts
6 pertaining to them, and upon information and belief as to other matters, as follows:

7 **I. NATURE OF ACTION**

8 1. For over a decade, Qualcomm has exploited its position as the dominant global
9 provider of modem chips for cellular devices to extract billions of dollars in supracompetitive
10 payments from other industry participants. The costs of those unfair and unlawful market-distorting
11 payments were then passed on to consumers in the form of inflated prices for cellular devices
12 throughout the world, including in California.

13 2. Qualcomm has unlawfully leveraged its market power in the markets for certain
14 modem chipsets, also called baseband processors, by tying sales of those chipsets to the taking of
15 licenses to Qualcomm’s full Standard Essential Patent portfolio—even though many of the patents
16 in that portfolio do not read on the devices manufactured by Qualcomm’s chipset customers.
17 Through this unlawful tie, Qualcomm is able to extract higher royalties on its patent portfolio
18 licenses and coerce licensees to agree to terms that prevent them from challenging the licenses as
19 non-FRAND, challenging the validity of the patents, or challenging Qualcomm’s practice of
20 forcing them to pay royalties for expired patents. Qualcomm has reinforced this tie by coercing
21 licensees into exclusive dealing arrangements with steep penalties for non-compliance.

22 3. This class action lawsuit is brought on behalf of the tens of millions of California
23 consumers who, because of Qualcomm’s unlawful scheme, were unknowingly forced to pay
24 artificially inflated prices for their smartphones, tablets, and other cellular devices. Qualcomm’s
25 conduct was and is in violation of California antitrust and consumer protection laws.

26 4. Plaintiffs’ claims in this case arise under the California Cartwright Act and Unfair
27 Competition Law (“UCL”), both of which provide more liberal standards for liability than are
28 available under the federal Sherman Act.

1 5. The Cartwright Act was not modeled on the Sherman Act and “is broader in range
2 and deeper in reach than the Sherman Act.” *In re Cipro Cases I & II*, 61 Cal. 4th 116, 160-61
3 (2015). Thus, a company’s conduct may violate the Cartwright Act even if it does not violate the
4 Sherman Act.

5 6. The reach of the UCL is even broader. Aimed at protecting consumers, the UCL
6 broadly prohibits any “unfair” business act or practice, and thus is not limited by the strictures of
7 the federal or state antitrust law. Accordingly, a business act or practice may violate the UCL even
8 if it does not violate federal or state antitrust law, or indeed any other law.

9 7. On behalf of themselves and a class of California consumers, Plaintiffs seek an order
10 declaring that Qualcomm’s conduct was and is unlawful, enjoining Qualcomm from continuing to
11 engage in this and any similarly unlawful conduct, and awarding money damages, restitution, and
12 all other relief to which Plaintiffs and putative class members are entitled for the class period of
13 February 11, 2011, through September 27, 2018.

14 8. Every smartphone, tablet, and other cellular device contains a piece of equipment
15 called a modem chipset (or baseband processor), which enables the device to connect and
16 communicate with wireless networks (such as those run by wireless network carriers like Verizon
17 and Sprint in the United States), and to transmit and receive voice and other data over those
18 networks. This core function of all cellular devices would be impossible without a modem chipset.



1 9. For decades, wireless network carriers in the United States and around the world
2 have participated in a cooperative system in which they agree to negotiate, adopt, and ultimately
3 implement cellular communication technology standards for the benefit of all industry participants
4 and society as a whole. It is because of this system that wireless networks around the world enjoy
5 a high degree of interoperability, which allows the average consumer to choose freely between a
6 great variety of cellular devices made by various device manufactures, knowing that whatever
7 device they choose should be able to easily connect and function with wireless networks run by
8 hundreds of domestic and foreign carriers.

9 10. The international cellular communication technology standards are established by
10 bodies known as **standard setting organizations** (“SSOs”), whose members include leading
11 telecommunications technology companies, device suppliers and manufactures, and other industry
12 participants, including government agencies. SSOs serve as a forum for their members to share and
13 vet technological innovations, and ultimately to decide **which technologies** will be incorporated
14 into standards for the next generation of a technological system, such as cellular
15 telecommunications systems (thereby picking market winners and losers).

16 11. When an SSO incorporates a new technology into a new standard, industry
17 participants’ ability to access that technology becomes essential to the functioning of the domestic
18 and international telecommunications infrastructures. The patents protecting such technologies are
19 known as **standard essential patents** (“SEPs”). All SEP holders stand to benefit enormously when
20 their patent-protected technology is incorporated into a standard, since industry participants selling
21 devices or technologies that comply with the relevant standard will have to pay the SEP holder
22 licensing and royalty fees on an ongoing basis. If not appropriately checked, SEP holders could
23 unfairly exploit their monopoly on standard essential technologies by withholding access to them,
24 extracting excessive licensing and royalty fees when access is granted, and engaging in other
25 conduct that stifles competition, deters future technological innovation, limits consumer choice,
26 and otherwise serves to entrench and extend their dominance over the relevant market.

27 12. To limit the obvious potential for abuse by SEP holders, SSOs have established a
28 series of basic rules and practices. As relevant here, SSOs generally require that industry

1 participants disclose all patents they hold on technologies under consideration for incorporation
2 into a standard and that patent holders agree, as an express condition of their patented technology
3 being incorporated into a standard, to license that technology to other industry participants on **fair,**
4 **reasonable, and non-discriminatory** (“FRAND”) terms. FRAND terms strike a balance between
5 compensating SEP holders for their patents and ensuring that new technologies can be adopted into
6 standards without SEP holders—who are granted a monopoly—gaining unfair power and
7 advantage over other industry participants, including their customers and competitors.

8 13. As an early developer of cellular technology, Qualcomm holds patents on
9 technologies that were incorporated into virtually every relevant cellular standard adopted during
10 the period relevant to this litigation, including the wireless telecommunications standards known
11 as Code Division Multiple Access (“CDMA”) and Long-Term Evolution (“LTE”). Qualcomm has
12 enormous market power in the markets for both CDMA and Premium LTE chipsets. A Premium
13 LTE chipset is a chipset that is used in a “premium” smart-phone, which Qualcomm has defined as
14 a smartphone with a retail average selling price of greater than \$300 (prior to 2013)¹ or greater than
15 \$400 (from 2013 forward).²

16 14. Like all other SEP holders, Qualcomm has repeatedly made promises and
17 commitments to license its SEP technologies on FRAND terms, knowing full well that that SSOs
18 and other industry participants would rely on those promises and commitments when deciding
19 whether to incorporate Qualcomm’s patented technologies into the relevant standards.

20 15. Despite those repeated promises and agreements, Qualcomm has systematically
21 disregarded its FRAND obligations as part of an unlawful scheme to leverage its market power in
22 CDMA and Premium LTE chips. Instead of honoring its FRAND commitments, Qualcomm has
23 long implemented its “No License, No Chips” policy, which ties sales of its CDMA and Premium
24 LTE chips to a requirement that purchasers take a license on Qualcomm’s full SEP patent portfolio.
25 The terms of that required license both require supra-FRAND compensation and prohibit the

26
27 ¹ Q2017MDL1_03031492 at 29 (May 24, 2011) (Qualcomm Strategic Plan 2011).

28 ² Q2017MDL1_03031501 at 53 (June 10, 2013) (Qualcomm Strategic Plan 2014).

1 licensee from challenging either the validity of Qualcomm’s patents or the non-FRAND terms of
2 the license itself.

3 16. Beginning at least as early as 2008, Qualcomm has systematically violated its
4 FRAND obligations by refusing to grant a full license for, or imposing onerous restrictions on full
5 licensing of, its SEPs to competing chipset makers; tying the sale of its CDMA and Premium LTE
6 chips to the taking of a full license on Qualcomm’s *entire* patent portfolio—regardless of how many
7 Qualcomm patents were practiced by the licensee’s devices; requiring device makers to pay
8 Qualcomm unreasonably high royalties for every device shipped regardless of whether those
9 devices used Qualcomm chipsets; and reinforcing its stranglehold on the industry by entering into
10 exclusive deals with Apple and other component part suppliers and device makers that foreclosed
11 and stifled competition. While Qualcomm insists that its agreement with Apple during the relevant
12 time period offered only “discounts” for exclusivity, in reality the agreement imposed *penalties* for
13 non-exclusivity because the prices Qualcomm charged Apple were higher than what the price
14 would have been absent Qualcomm’s coercive dealing.

15 17. There are no legitimate business justifications for Qualcomm’s exclusionary and
16 anticompetitive conduct. To the extent Qualcomm has sought to achieve any legitimate business
17 purposes through its conduct, it has not used the least restrictive means for doing so, any claimed
18 pro-competitive benefit is outweighed by the anticompetitive harm, and any purported legitimate
19 business justifications are mere pretexts. Qualcomm’s “No License, No Chips” policy, refusal to
20 license its patents to competitors, and coercive agreements with OEMs—including its *de facto*
21 exclusive dealing arrangements with Apple—are unlawful restraints of trade designed by
22 Qualcomm to maintain its monopoly power and hide its illegal conduct.

23 18. The supra-FRAND nature of Qualcomm’s SEP patent licenses is evident on their
24 face: the long-standing industry custom is to calculate SEP royalty payments based on the value of
25 the device component containing the patented technology, but Qualcomm requires device makers
26 to calculate its royalty payments based on the price of the **entire finished device**. This results in
27 Qualcomm extracting unfair and unreasonable royalties from device makers. For example, Apple
28 has long offered the same model of iPhone at several price points depending on the amount of

1 storage capacity included in the device, charging a higher price for phones that contain more
2 storage. Even though Qualcomm's technology had nothing to do with the additional storage that is
3 the reason for the higher price, Qualcomm still compelled Apple to pay royalties based on the total
4 price of the finished device. Similarly, when Apple was able to charge more for iPhone models that
5 included new features, such as more advanced camera and touchscreen technologies that had
6 nothing to do with Qualcomm-patented technology, Qualcomm again forced Apple to pay royalties
7 based on the total price of the finished device.

8 19. The additional, supracompetitive royalty revenue that Qualcomm extracted from
9 Apple, and that it extracted and continues to extract from other device makers, and thus ultimately
10 from cellular device purchasers, does not reflect any beneficial contribution by Qualcomm to
11 cellular devices or the cellular device market. Instead, it is simply a market-distorting rent that
12 Qualcomm is able to extract from industry participants by abusing its dominant market position
13 and SEP portfolio, and by disregarding its FRAND and other commitments.

14 20. For example, Apple has alleged it was forced to pay more SEP royalties to
15 Qualcomm than all other SEP holders combined—even though other SEP holders have stronger
16 intellectual property rights related to Apple's products. Qualcomm's abuse of its market dominance
17 even goes so far as to compel device makers to accept its licensing terms and royalty rates with
18 respect to devices that do not use Qualcomm modem chipsets. In this manner, Qualcomm has
19 effectively levied a private "tax" on the entire cellular device industry, causing a ripple effect of
20 universally inflated prices in cellular devices for consumers worldwide, including in California.

21 21. The impact of Qualcomm's No-License-No-Chips tie is self-reinforcing. Qualcomm
22 has used its market power to increase its own profits by taxing all rival sales, which had an
23 exclusionary effect on rival chipset manufacturers. This exclusion further reinforced Qualcomm's
24 monopoly power, which enhanced and prolonged Qualcomm's ability to continue imposing the
25 No-License-No-Chips tie and keep its royalties elevated to supra-FRAND levels. Thus, the restraint
26 both directly raises chipset prices and increases Qualcomm's ability to engage in other types of
27 anticompetitive behavior. As a consequence of Qualcomm's unlawful tying of a license to its SEP
28 portfolio to the purchase of its CDMA and Premium LTE chipsets, along with its refusal to license

1 rivals and its unlawful exclusive dealing arrangements, Qualcomm has extracted **\$6.5 billion** in
2 overcharges from its licensees.³

3 22. Qualcomm's conduct has harmed Plaintiffs and the putative class of California
4 consumers they seek to represent by forcing them to pay inflated, supracompetitive prices for their
5 cellular devices, in violation of the California Cartwright Act and the California Unfair Competition
6 Law.

7 **II. THE PARTIES**

8 **A. Plaintiffs**

9 23. Plaintiff Sarah Key, who resides in California, purchased an Apple iPhone 6 for
10 personal use and not for resale during the Class Period. Plaintiff is a member of the proposed Class
11 who was injured in fact and has lost money or property as a result of Qualcomm's unlawful and
12 anticompetitive conduct.

13 24. Plaintiff Andrew Westley, who resides in California, purchased a Samsung Galaxy
14 Tab-E Tablet and an Android cellular phone for personal use and not for resale during the Class
15 Period. Plaintiff is a member of the proposed Class who was injured in fact and has lost money or
16 property as a result of Qualcomm's unlawful and anticompetitive conduct.

17 25. 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 Class Period. Plaintiff is a member of the proposed Class who was
20 injured in fact and has lost money or property as a result of Qualcomm's unlawful and
21 anticompetitive conduct.

22 26. Plaintiff Carra Abernathy, who resides in California, purchased an Apple iPhone 7
23 Plus for personal use and not for resale during the Class Period. Plaintiff is a member of the
24 proposed Class who was injured in fact and has lost money or property as a result of Qualcomm's
25 unlawful and anticompetitive conduct.

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27
28 ³ See Expert Report of Michael J. Lasinski at 109 (Fig. 70) (Oct. 26, 2018).

1 **B. Defendant**

2 27. Defendant Qualcomm is a Delaware corporation with its principal place of business
3 at 5775 Morehouse Drive, San Diego, California 92121. Qualcomm develops, designs, licenses,
4 and markets worldwide its digital communications products and services through two wholly
5 owned subsidiaries: Qualcomm CDMA Technologies (“QCT”), which handles equipment sales,
6 and Qualcomm Technology Licensing (“QTL”), which licenses patents and other intellectual
7 property rights from Qualcomm’s intellectual property portfolio. QCT is operated by Qualcomm
8 Technologies, Inc. (“QTI”), another wholly owned subsidiary of Qualcomm.

9 28. Qualcomm maintains offices and employees and regularly conducts business
10 throughout this District, including in San Francisco, Santa Clara, and Alameda counties.

11 **III. JURISDICTION AND VENUE**

12 29. This Court has jurisdiction over the subject of this action pursuant to the Class
13 Action Fairness Act, 28 U.S.C. § 1332(d), because the matter in controversy exceeds the sum of \$5
14 million exclusive of interest and costs, and certain Class members are citizens of states different
15 from Qualcomm. In addition, this Court may retain supplemental jurisdiction over Plaintiffs’ state-
16 law claims under 28 U.S.C. § 1367(a).

17 30. This Court has personal jurisdiction over Qualcomm because it resides in and has
18 its principal place of business in the State of California and substantial parts of the anti-competitive
19 conduct at issue took place in, originated in, or were implemented in whole or in part within the
20 State of California.

21 31. Venue is proper in this Court under 28 U.S.C. § 1391 because a substantial part of
22 the events giving rise to Plaintiffs’ claims occurred in this District, and because Qualcomm
23 transacts business and maintains facilities in this District and thus is subject to personal jurisdiction
24 here.

1 **IV. FACTUAL ALLEGATIONS**

2 **A. Qualcomm Leverages the Standards-Setting Process to Attain a Strategic**
3 **Dominant Position atop the Modem Chipset Industry.**

4 32. Cellular devices such as smartphones and tablets include a semiconductor device
5 known as a baseband processor or modem chip. These chips manage the cellular device’s radio
6 control functions, including signal generation, modulation, encoding, and frequency shifting,
7 enabling the device to communicate with a wireless network. A hypothetical phone without a
8 modem chipset would be unable to make calls and would not have the ability to send or receive
9 data when outside the presence of a wifi access point.

10 33. Modem chips must comply with the technological communications standard that a
11 wireless network uses. Chips that comply with multiple wireless network standards are known as
12 “multi-mode” chips. Multi-mode chips can communicate with networks that use multiple standards
13 or multiple networks using different standards.

14 34. Qualcomm, along with many other companies, contributed to the development of
15 technological standards that govern how consumer cellular devices connect to voice and data
16 networks.

17 35. Companies in the wireless industry form SSOs to develop such technical standards
18 to ensure interoperability and compatibility of products and wireless networks for consumer use.
19 Patents that are essential to practicing a technical standard are called standard essential patents
20 (“SEPs”).

21 36. Qualcomm owns SEPs for technologies used to implement various cellular
22 communications standards, such as the CDMA, WCDMA/UMTS, and LTE standards.

23 37. Modem chip makers, cellular device makers, and other companies that make or
24 supply products or services that practice a given cellular communications standard must obtain a
25 license to practice the applicable cellular SEPs, or else they will infringe those SEPs.

26 38. There are several different SSOs related to wireless communications. The
27 International Telecommunications Union (“ITU”) is a worldwide telecommunications SSO
28

1 composed of governments and private companies. The Telecommunications Industry Association
2 (“TIA”) is the primary SSO in the United States for the telecommunications industry and is
3 composed of companies that manufacture or supply products or services in that industry. The
4 European Telecommunications Standards Institute (“ETSI”) is an independent, non-profit
5 organization based in France that focuses on producing global communication standards. These
6 SSOs and others have developed several generations of cellular communications standards, known
7 as 1G, 2G, 3G, and 4G.

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

13 40. When the 3G series of standards were introduced in the late 1990s, there were two
14 main standards: (1) the Universal Mobile Telecommunications System (“UMTS”) and (2) third-
15 generation CDMA (“3G-CDMA”). The UMTS standard also incorporated a CDMA-based
16 technology known as wideband CDMA (“WCDMA”). GSM network operators (such as AT&T
17 and T-Mobile) transitioned to the UMTS standard, while the 2G-CDMA operators (such as Verizon
18 and Sprint) transitioned to the 3G-CDMA standard. Qualcomm had a smaller share of SEPs related
19 to the UMTS and 3G-CDMA standards than its share of SEPs related to the 2G-CDMA standard.

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

1 **B. Qualcomm Lures Customers into Acquiescence Through Its Knowingly**
2 **Deceptive and Disingenuous FRAND Commitments.**

3 42. Qualcomm belongs to each of the leading SSOs involved in setting wireless
4 communication standards and has made commitments to such SSOs to license its SEPs on fair,
5 reasonable, and non-discriminatory (“FRAND”) terms. But Qualcomm has violated wholesale its
6 FRAND commitments through a variety of schemes, including refusing to license its competitors
7 directly, tying the provision of its chip supply to original equipment manufacturers (“OEMs”)
8 acquiescing to its non-FRAND licensing terms and to applying royalty terms in a discriminatory
9 fashion, and bundling the licensing of its SEP patents with non-SEP patents.

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

16 44. Such abuse is exacerbated when SEP holders like Qualcomm “over-declare” patents
17 as being essential to practicing a standard. SSOs generally have no involvement in assessing the
18 validity and essentiality of patents declared as SEPs. *See, e.g., Legal Considerations*, ETSI Seminar
19 2014. These abuses contribute to “royalty stacking,” where a single product-maker is required to
20 pay “excessive royalties to many different holders of SEPs.” *See Microsoft Corp. v. Motorola, Inc.*,
21 No. C10-1823JLR, 2013 WL 211217, at *11 (W.D. Wash. Apr. 25, 2013).

22 45. To protect against such abuses—and to ensure the collaboration among competitors
23 embodied in the standard-setting process does not itself constitute an antitrust violation—SSOs
24 require participants to publicly disclose any claimed SEPs and promise to license such patents to
25 anyone who practices the standard on a royalty-free or FRAND basis. Absent such a promise, SSOs
26 will usually design-around the claimed SEPs at issue. Qualcomm induced the relevant SSOs to
27
28

1 incorporate Qualcomm technology into the relevant standards by promising to license its cellular
2 SEPs on FRAND terms—promises that it knowingly repudiated after the standards were adopted.

3 46. FRAND royalties adhere to several requirements designed to prevent misuse of the
4 monopoly power conferred on SEP holders by the adoption of their patented technology into a
5 standard. FRAND royalties must include both an appropriate royalty base and royalty rate and be
6 limited to the contribution of the patented technology to the standard. FRAND royalties do not
7 include or reflect value attributable to (1) the mere fact that the patent has been “locked in” to the
8 standard; (2) other technologies that contribute to the standard; or (3) other technologies outside
9 the standard that are included in the product or service at issue. Indeed, the purpose of SSOs is to
10 create mechanisms for sharing essential intellectual property and making such IP freely available
11 to industry participants who wish to practice it within the standard on FRAND terms. Their purpose
12 is not to give SEP holders the opportunity to stifle competition and reap a windfall.

13 47. An SEP holder who makes a FRAND commitment also promises to license its SEPs
14 on a non-discriminatory basis, meaning in part that the SEPs will be licensed to any “willing
15 licensee.” This is a critical safeguard that prevents an SEP holder from engaging in patent “hold
16 up” by refusing to license its SEPs to competitors or by licensing its SEPs to competitors on
17 discriminatory or otherwise 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, at
20 *11. The FRAND obligation is also critical to ensuring that standard-setting activities themselves—
21 which involve collaboration among competitors—do not run afoul of antitrust laws. As described
22 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
[intellectual property rights], if unconstrained, may permit it to demand
supracompetitive royalties. It is in such circumstances that measures such as
FRAND commitments become important safeguards against monopoly power.

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

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

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

9 51. ETSI participants must follow its Intellectual Property Rights (“IPR”) Policy,
10 pursuant to which members are required to disclose even potential standard-essential patents and
11 patent applications and make a written commitment to grant irrevocable patent licenses on FRAND
12 terms.⁴ Qualcomm has declared over 30,000 global assets to be “ESSENTIAL IPR.” Qualcomm
13 has submitted declarations to ETSI stating that “[t]o the extent that the IPR(s) ... are or become,
14 and remain ESSENTIAL in respect of the ETSI Work Item, STANDARD and/or TECHNICAL
15 SPECIFICATION,” Qualcomm is “prepared to grant irrevocable licenses under this/these IPR(s)
16 on terms and conditions which are in accordance with Clause 6.1 of the ETSI IPR Policy.”
17 Qualcomm made similar commitments to the other SSOs named above.

18 52. Qualcomm is thus required to license its cellular SEPs on FRAND terms to potential
19 licensees, such as cellular device OEMs and competing chip suppliers. SEPs holders such as
20 Qualcomm honoring their FRAND promises and obligations is a fundamental and essential
21 component of the whole telecommunications standard-setting enterprise, which in turn is a core
22 component of the domestic and international economy. The SSOs and their members and
23 stakeholders—which includes not only Qualcomm’s potential licensees but also those potential
24 licensees’ downstream customers and consumers—relied on Qualcomm’s express and implied
25 promises and commitments to SSOs during the relevant standard-setting processes that it would
26 honor its FRAND obligations. Apple and other wireless device makers relied on Qualcomm’s

27 _____
28 ⁴ ETSI Rules of Procedure, Annex 6, Clause 4, *available at*
http://www.etsi.org/website/document/legal/etsi_ipr-policy.pdf.

1 promise to license their SEPs on FRAND terms when they made long-term strategic decisions to
2 orient substantial portions of their businesses toward designing, developing, and marketing
3 products compatible with 3G/UMTS and 4G/LTE.⁵ As a result, Qualcomm gained critical business
4 advantages and generated significant revenue by voluntarily agreeing to assume FRAND
5 commitments.

6 53. But, as shown below, Qualcomm has systematically violated its promise to license
7 its cellular SEPs on FRAND terms, including by refusing to license to competing chip
8 manufacturers at all, and by using its resulting market power in CDMA and Premium LTE chips to
9 compel OEMs to accept non-FRAND licensing terms.

10 **C. Qualcomm Has Monopoly Power in the CDMA and Premium LTE Chip
11 Markets.**

12 54. Qualcomm's QCT division manufactures modem chips that are compliant with 2G-
13 CDMA, 3G-CDMA, UMTS, and LTE standards.

14 55. Qualcomm has monopoly power in two types of modem chips—CDMA (over 90%
15 market share) and Premium LTE (over 70% market share).⁶

16 56. Qualcomm's QTL division is responsible for licensing Qualcomm's patents.
17 Qualcomm owns thousands of patents that Qualcomm has declared are essential to the 3G-CDMA,
18 UMTS, and LTE standards.

19 57. Although the QCT division generates most of Qualcomm's revenues, QTL
20 generates most of Qualcomm's profits.

21 **D. Qualcomm Reinforces Its Stranglehold on the Industry Through Its No-
22 License-No-Chips Tying Arrangement.**

23 58. Qualcomm has entrenched its monopolies in CDMA and Premium LTE chipsets
24 through its "No License, No Chips" policy (the "NLNC policy").

25 59. Under its NLNC policy Qualcomm has refused to supply cellular handset OEMs
26 with CDMA and Premium LTE chips unless the OEM agrees to take out a separate license to all of

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

⁶ Expert Report of Kenneth Flamm at 26.

1 Qualcomm's cellular SEPs on Qualcomm's preferred terms, which are highly favorable to
2 Qualcomm, highly prejudicial to licensees, and inconsistent both with customary FRAND terms
3 and with the specific FRAND commitments Qualcomm has made.

4 60. Qualcomm has required OEMs to take a license, the terms of which require the OEM
5 to (1) pay a substantially above-FRAND royalty rate; (2) calculate royalties as a percentage of
6 every handset sold, regardless of who supplied the chipset; and (3) forfeit the right to challenge
7 Qualcomm's patents or license terms through litigation.

8 61. Qualcomm's licensing terms are the same for CDMA, WCDMA, and LTE chips.
9 Qualcomm's former President Derek Aberle testified that most devices with LTE functionality are
10 still covered by the 3G CDMA licenses even though those licenses are now obsolete:

11 [T]he market isn't yet here for single-mode LTE. So if you look at the market, most
12 of it today is still multi-mode 3G-4G devices. In the way our licenses are set up,
13 those devices would be licensed under what we call here the CDMA licenses. And
14 you only really get to the single-mode LTE licenses being applicable when you have
15 devices that no longer have 3G in them but just have 4G. And that market hasn't
16 really developed.⁷

17 62. Qualcomm's NLNC policy is an unfair and unlawful tying arrangement in violation
18 of the Cartwright Act and the UCL.

19 63. Tying occurs when a seller refuses to sell one product unless the buyer also takes a
20 second product from the seller. The first product is called the "tying product," and it is generally
21 the product in which the seller has the greatest market power. The second product, which the seller
22 forces the buyer to take, is called the "tied product."⁸

23 64. Here, the tying product is Qualcomm's chipsets, and the tied product is supra-
24 FRAND licenses for Qualcomm's cellular SEPs. More specifically, the tying products are
25 Qualcomm's CDMA chipsets and Premium LTE chipsets, and the tied products are supra-FRAND
26 licenses for 3G and 4G cellular SEPs, including those related not only CDMA and Premium LTE,
27 but also WCDMA/UMTS and non-Premium LTE. The tied products thus include supra-FRAND
28 licenses for SEPs on devices that do not use the tying products.

⁷ Aberle Dep. 121:17-122:3 (Oct. 6-7, 2016).

⁸ Einer Elhauge, U.S. ANTITRUST LAW & ECONOMICS 409 (3d ed. Foundation Press 2018).

1 65. Qualcomm imposed its NLNC policy uniformly and marketwide. Indeed,
2 Qualcomm has admitted that it does not sell baseband processor chipsets to unlicensed cellular
3 device manufacturers.⁹

4 66. Additionally, various Qualcomm executives have given sworn testimony in which
5 they admit the NLNC policy was official company policy. For example, when asked about the
6 existence and uniformity of the NLNC policy, Qualcomm executive and “chief lawyer” Fabien
7 Gonell testified that “Qualcomm will not sell baseband modem chips to customers that have not
8 taken a license to at least Qualcomm’s cellular essential patents.”¹⁰ Qualcomm executive vice-
9 president and president of QTL Alex Rogers testified: “It’s Qualcomm’s policy not to sell chips to
10 unlicensed OEMs.”¹¹ Qualcomm senior VP legal counsel Victoria Chen, when asked whether
11 Qualcomm has “ever communicated to a baseband chipset customer that it will only sell to the
12 baseband chipset customer if that customer has a patent license,” responded by testifying: “I believe
13 we’ve made our policy generally known to customers,” and “I think we’ve been very public about
14 our policy.”¹²

15 67. The NLNC policy is also embodied in all of Qualcomm’s component supply
16 agreements. Those agreements permit Qualcomm to revoke the agreement if an OEM agrees to
17 component supply terms and supra-FRAND license terms, but later breaches the licensing terms.

18 68. For example, Qualcomm and Samsung’s 2004 component supply agreement states
19 that Samsung “may not use or sell any [ASIC component], alone or in combination with other
20 software or components, without a license from QUALCOMM under the License Agreement
21 covering all applicable patents.”¹³ This agreement permits Qualcomm to terminate the agreement
22 if Samsung defaults under the referenced Licensing Agreement. Qualcomm entered into component
23

24 ⁹ Def.’s Obj. & Suppl. Resp. to Apple Inc.’s Special Interrogs. Nos. 9 and 13.

25 ¹⁰ Gonell Dep. 28:9-14 (Sept. 9, 2016).

26 ¹¹ Rogers Dep. 210:2-12 (Feb. 22-23, 2018).

27 ¹² Chen Dep. 115:2-10 (Feb. 8-9, 2018).

28 ¹³ SFT-0000221 at 29, 30 (Sept. 27, 2004) (Component Supply Agreement between Samsung and Qualcomm).

1 supply agreements containing similar terms with LG,¹⁴ HTC,¹⁵ and Motorola,¹⁶ and with contract
2 manufacturers such as Foxconn¹⁷ and Pegatron.¹⁸

3 69. A 2010 internal Qualcomm presentation also admits that Qualcomm has entered into
4 license agreements with “every known handset supplier.”¹⁹ Given the uniformity with which
5 Qualcomm has applied its NLNC policy, there is good reason to believe that all Qualcomm’s
6 license agreements with handset suppliers contain terms that are the same or substantially similar
7 to those in its license agreements with Samsung, LG, HTC, Motorola, and others.

8 70. The NLNC policy allowed Qualcomm to anticompetitively: increase its modem chip
9 royalties, increase its cellular SEP royalties, and restrain competition from its chipset rivals. All of
10 these anticompetitive purposes and effects of the NLNC policy individually and collectively,
11 harmed California consumers.

12 71. The NLNC policy harms Qualcomm’s competitors because the policy requires
13 every OEM to pay Qualcomm for the use of Qualcomm’s SEPs on each device, regardless of
14 whether the device contains a Qualcomm chipset. In other words, even in devices where no
15 Qualcomm technology is present, Qualcomm still compels payment from the OEM.

16 72. At the same time, Qualcomm offered so called “marketing incentives” or “rebates”
17 to OEMs that agreed to use Qualcomm’s chips exclusively or nearly exclusively:
18
19
20

21 ¹⁴ Q2017MDL1_02930610 at 615, 616 (Sept. 1, 2000) (ASICs Supply Agreement between LG and
Qualcomm).

22 ¹⁵ Q2017MDL1_03104695 at 699, 700 (June 11, 2001) (Components Supply Agreement between
HTC and Qualcomm).

23 ¹⁶ Q2017MDL1_02930690 at 96, 98 (Jan. 1, 2004) (Components Supply Contract between
Motorola and Qualcomm).

24 ¹⁷ Q2017MDL1_03104554 at 557, 558 (Aug. 28, 2003) (Components Supply Agreement between
25 Ambit Microsystems and Qualcomm). This agreement was assigned to Hon Hai Corporation in
26 March 2004, Q2017MDL1_03104568, and delegated to Foxconn in October 2005,
Q2017MDL1_03104540.

27 ¹⁸ Q2017MDL1_03106718 at 720, 721 (Aug. 1, 2008) (Components Supply Agreement between
Pegatron and Qualcomm).

28 ¹⁹ Q2014FTC03543713 at slide 2.

| OEM | “Carrot” for Exclusivity | Practical Effect |
|------------|--------------------------|--|
| Apple | Incentives/rebates | 100% Qualcomm chipsets ²⁰ |
| Blackberry | Incentives | 100% Qualcomm chipsets ²¹ |
| Huawei | “Reduced royalty” | 100% Qualcomm chipsets ²² |
| Lenovo | Incentives | 30-50 million Qualcomm chipsets ²³ |
| LGE | Incentives/rebates | 85% Qualcomm chipsets ²⁴ |
| Motorola | “Reduced royalty” | 100% Qualcomm chipsets ²⁵ |
| Samsung | Incentives | 85% Qualcomm chipsets & 100% Qualcomm premium chipsets ²⁶ |

73. Though labeled by Qualcomm as incentives, rebates, or other sorts of discounts, these in fact represented potential *penalties* for non-exclusivity. A true discount offers customers a reduction from the price that would have been charged without the loyalty condition, thus offering them an inducement to accept the loyalty condition. In contrast, a disloyalty penalty threatens disloyal customers with higher prices than they would have paid without the loyalty program, in order to coerce them to accept a loyalty condition that leaves them paying a price no lower than it would have been without the loyalty program. Here, the latter applies: for instance, Apple’s exclusivity agreement with Qualcomm did not reward Apple for its exclusivity with prices that were discounted from the prices paid by other customers, but rather threatened Apple with prices *above* those paid by nonexclusive customers unless Apple accepted exclusivity.

74. The resulting harm to competition from Qualcomm’s conduct is illustrated in the following hypothetical. Assume that the all-in monopoly price is \$30, which leads to Qualcomm

²⁰ Expert Report of Einer R. Elhauge at 62-69 (Oct. 26, 2018) (describing Apple agreements).

²¹ Grubbs Dep. 248:9-15 (Mar. 1, 2018); BB_FTC_00019022.

²² Contract between Qualcomm and Huawei for the License of Certain Technology for the Manufacturing and Sale of Certain CDMA Subscriber Units (May 29, 2003).

²³ Q2017MDL1_02658183 (describing “carrots and sticks”).

²⁴ Q2014FTC03370698 (July 11, 2004) (Chipset Purchase and Incentive Agreement between LGE and Qualcomm).

²⁵ MOTO-QUALSUB-00149571 (Oct. 21, 2016).

²⁶ Amendment to Infrastructure and Subscriber Unit License and Technical Assistance Agreement between Qualcomm and Samsung.

1 charging a monopoly chipset price of \$25 when a FRAND license is \$5. Assume also that the price
 2 of a competitor’s chipset is \$16. As shown below, had Qualcomm separately offered a monopoly
 3 chipset price and a FRAND royalty, it would face a threat from the competitor’s \$21 all-in price (a
 4 \$16 chip, plus a \$5 FRAND license). However, Qualcomm destroys such competition by (1) using
 5 its chipset monopolies to coerce OEMs to pay supra-FRAND royalties regardless of who supplies
 6 the OEMs’ chips, and (2) providing “rebates” to OEMs that will result in a lower all-in price for
 7 the OEM but only if the OEM uses Qualcomm chips. In this hypothetical, the competitor is rendered
 8 nonviable because Qualcomm rigs the “rebate” to ensure that OEMs will pay a lower all-in price if
 9 they source their chips from Qualcomm, and a higher all-in price if they source their chips from a
 10 Qualcomm competitor:

| | Without NLNC | | With NLNC | |
|--------------------|--------------|------------|-----------|------------|
| | Qualcomm | Competitor | Qualcomm | Competitor |
| Modem Chip | \$25 | \$16 | \$25 | \$16 |
| Qualcomm Royalty | \$5 | \$5 | \$15 | \$15 |
| Exclusivity Rebate | \$0 | \$0 | \$10 | \$0 |
| All-In | \$30 | \$21 | \$30 | \$31 |

17 75. In this manner, Qualcomm effectively pays OEMs a kickback, in the form of a
 18 “rebate” or other discount, as an inducement to keep sourcing their chips from Qualcomm instead
 19 of Qualcomm’s competitors. Put another way, Qualcomm is paying out a share of its monopoly
 20 profits to OEMs to induce them to exclude Qualcomm’s rivals, thereby reinforcing Qualcomm’s
 21 monopoly. This business practice differs markedly from ordinary procompetitive price competition
 22 where a seller offers discounts to attract a buyer, but the seller’s competitors still have a free and
 23 fair opportunity to compete for the buyer’s business.

24 76. Plaintiffs’ expert Michael Lasinski found that Qualcomm’s routine business practice
 25 has been to charge OEMs supra-FRAND royalties, whether directly or through contract
 26 manufacturers. The OEMs to which Qualcomm’s overcharges applied included Apple, Samsung,
 27 LG, Motorola/Lenovo, HTC, ZTE, Blackberry, and Kyocera. The overcharges ranged from [REDACTED] %
 28

1 to █████% of total handset price, a massive financial drag on the industry especially given the number
 2 of purchasers and volume of commerce affected. The rates actually charged by Qualcomm to its
 3 licensees were in many instances two or three times a FRAND rate, or even more. For instance, the
 4 average running royalty Qualcomm charged Apple █████
 5 █████; and the average running royalty rate Qualcomm charged
 6 Alcatel/TCL █████
 7 █████.²⁷

8 77. That Qualcomm is the beneficiary of all excess royalty payments—even the ones on
 9 devices with Qualcomm chipsets—means that the supra-FRAND royalty is *not* affecting
 10 Qualcomm and its rivals in a neutral fashion. Rather, Qualcomm is obtaining a windfall profit
 11 beyond what would be efficiently allocated by a market unhindered by Qualcomm’s NLNC policy.
 12 In the long run, this generates a permanent anticompetitive power imbalance between Qualcomm
 13 and its competitors, and it ensures Qualcomm’s continued stranglehold on the market by raising
 14 rivals’ costs and severely reducing rivals’ ability to invest in innovation.

15 78. Coercing top chipset purchasers to source all or virtually all their chips from
 16 Qualcomm instead of multiple suppliers also artificially increases barriers to entry in the chipset
 17 market by suppressing nascent competitors’ ability to gain market share until they attain scale
 18 sufficient to cover large purchasers’ full requirements. This suppression of new market entrants
 19 enables Qualcomm to maintain its market dominance despite innovating at a slower pace and
 20 deprives customers and the broader economy of the technological advances that would otherwise
 21 be enjoyed from a market with free and fair competition between multiple competitors.

22 79. Qualcomm extracted supra-FRAND royalties from OEMs because of its unlawful
 23 tying arrangement.

24 80. For example, Samsung told federal regulators that it asked Qualcomm for written
 25 assurances that chipset supply would not be disrupted during SEP licensing negotiations with
 26 Qualcomm, and Qualcomm refused to provide such an assurance. In the end, Samsung agreed to a
 27

28 ²⁷ See Expert Report of Michael J. Lasinski at 108 (Fig. 69) (Oct. 26, 2018).

1 15-year license with Qualcomm due in part to the “veiled threat” from Qualcomm and complaints
 2 from Samsung engineering that Qualcomm was giving poor technical support due to ongoing
 3 licensing negotiations.²⁸ Samsung stated in a regulatory submission that it “had no option but to
 4 accept Qualcomm’s licensing demands if it wanted to continue selling mobile phones” especially
 5 because “Qualcomm’s share of Samsung’s chipset purchases was a staggering 100% in 2004,” and
 6 “[a]s a result, Qualcomm had all of the bargaining power.”²⁹ Indeed, Qualcomm’s own internal
 7 documents show that it explicitly threatened to terminate Samsung’s license and cease modem chip
 8 supply in 2001 during a licensing dispute.³⁰ Since Qualcomm had Samsung over a barrel, Samsung
 9 acquiesced.

10 81. Apple had a similar experience to that of Samsung. When asked whether “an
 11 ongoing threat to supply” was “somehow a point of leverage that Qualcomm could exercise over
 12 Apple,” an Apple executive testified that “It was a huge point of leverage. ... [W]e knew if at any
 13 point in time we had some type of IP dispute with Qualcomm, we knew the entire supply was at
 14 peril.”³¹ Asked whether Apple felt compelled to “accept terms that it considered to be unfair,” the
 15 executive explained: “We didn’t have any choice. In order to procure Qualcomm chipsets, you have
 16 to be a licensee, going back to the bundling discussion. ... And so they acquiesced to license terms
 17 that I think each must feel are unfair and exorbitant.”³²

18 82. Qualcomm’s practice of threatening chip supply disruptions had a similarly
 19 outcome-determinative effect on its licensing negotiations with LG Electronics (“LGE”). LGE has
 20 testified that, in 2004, Qualcomm coerced it into accepting a license on terms “substantially similar”
 21

22 ²⁸ FTC-PROD-0021940 at 13-14; *see also* SFT-0023969 at 972 (“We additionally explained the
 23 precedent where Qualcomm stopped supplying software when the license contract was not renewed
 during the time of the 2009 negotiations.”); Lee Dep. 184:4–185:13 (Mar. 8-9, 2018).

24 ²⁹ FTC-PROD-0021940 at 11.

25 ³⁰ Q2017MDL5_12370426 (“Thus, if Samsung persists in taking the position that its license
 26 agreement does not cover [CDMA 2000 1X] and does not pay QUALCOMM the 1X royalties due
 under the agreement, we will have no choice but to take all action necessary to enforce the terms
 of our license agreement, including possible termination. Under our agreements, we do not ship
 ASICs to non-licensees or to licensees who are not performing their obligations.”).

27 ³¹ Blevins Dep. 205:7-15 (Jan. 28, 2016).

28 ³² *Id.* at 116:8-21.

1 to terms it had previously described as “unacceptable” because “LGE had to consider the business
2 risks. When Qualcomm threatened to terminate the Supply agreement, LGE had no option but to
3 agree to whatever Qualcomm demanded. LGE’s top management did not want to take the risk of
4 endangering LGE’s mobile business.”³³ This 2004 licensing deal “was struck suddenly after
5 Qualcomm threatened to terminate the Supply agreement.”³⁴ Faced with the enormous risk of losing
6 access to Qualcomm’s baseband processors, LGE agreed to enter into the 2004 CDMA amendment:
7 “When Qualcomm escalated its threat by stating its intention to terminate the Supply agreement,
8 LGE’s top management decided to settle.”³⁵

9 83. There is similar evidence from every other major cellular handset manufacturer.
10 When asked why Motorola acquiesced to a royalty burden to Qualcomm that it considers unfair,
11 Motorola’s Todd Madderom testified: “We honestly don’t have many other options.”³⁶ HTC’s
12 Wanlin Yu (Director in HTC’s Legal Department) testified that HTC does not consider its
13 Subscriber Unit License Agreement (“SULA”) with Qualcomm to be consistent with Qualcomm’s
14 FRAND commitments.³⁷ Yu also testified that HTC could not terminate its license with Qualcomm
15 because Qualcomm chips are the only ones that can meet certain carriers’ requirements, which
16 means that if Qualcomm says no to a request for a lower royalty, HTC needs to accept whatever
17 royalty Qualcomm demands.³⁸ Corporate representatives from Pegatron, Blackberry, and Huawei
18 testified similarly.

19
20
21 ³³ Hwi-Jae Cho Witness Examination Questionnaire Response No. 91; *see also* Tony (Taekwon)
22 Son (LG Electronics, Inc.’s employee designated as knowledgeable about LGE’s purchases of
23 baseband processors), Responses to Witness Examination Questionnaire, Annex A, Nos. 17, 19, 21
24 (Mar. 30, 2018) (“It would have been impossible for LGE to maintain CDMA related to the mobile
25 business if LGE had lost access to Qualcomm’s processors.”); *id.* at No. 23. (“It would have been
26 impossible for LGE to maintain CDMA and premium LTE related to the mobile business if LGE
27 had lost access to Qualcomm’s processors.”).

28 ³⁴ Hwi-Jae Cho Witness Examination Questionnaire Response No. 93.

³⁵ *Id.* at Nos. 107-108.

³⁶ Madderom Dep. 52:22-53:6 (Mar. 9, 2016).

³⁷ Yu Dep. 48:22-49:13 (June 16, 2016).

³⁸ *Id.* at 47:15-48:4.

1 84. Qualcomm’s own employees have recognized and acknowledged the licensing
2 advantage conferred by the company’s NLNC policy. For example, Qualcomm President Steve
3 Altman stated in a February 2008 email:

4 If you consider the fact that the only companies that have attacked us today are
5 companies that essentially purchase little or no ASICs from us, you can understand
6 how the combination of QCT with QTL greatly enhances QTL’s success. As
7 CDMA2000 grows and OEMs desire to participate in it to grow their market share,
8 OEMs will remain reliant on us for continued supply and will need to maintain
9 positive relationships with us. ... If we were two companies, they would rely entirely
10 on QCT, but would have no incentive NOT to attack QTL.³⁹

11 This remarkable statement expressly acknowledges that there is no reason that QCT and QTL could
12 not operate as separate businesses rather than in concert, and that Qualcomm has knowingly
13 exploited the opportunities created by its multiple roles in the industry to manipulate its business
14 partners and extract supracompetitive rents.

15 85. When Qualcomm again considered separating its licensing business from its
16 component sales business in 2015,⁴⁰ David Wise (Qualcomm’s VP of Finance) wrote in an October
17 2015 email:

18 “Notably, we are seeing in the market today that there is a high correlation between
19 our modem (chip) share and licensing compliance and royalty rate sustainability
20 SO IT’S CRITICAL THAT WE MAINTAIN HIGH MODEM SHARE TO
21 SUSTAIN LICENSING.”⁴¹

22 86. A 2015 Qualcomm draft presentation overseen by Wise also stated that “QTL, on
23 its own, lacks an ongoing ‘give/get’ relationship with licensees that creates ongoing dependence on
24 QTL,” in part because “[i]n a dispute with OEMs over royalty rates (pricing) we cannot pull access
25 to the technology back.”⁴² The presentation further noted that “[t]o date, QCT has helped maintain
26 the ‘give/get’ necessary to defend the royalty rate,” and that “we see today a high correlation
27 between our modem (chip) share and licensing compliance and royalty rates.”⁴³ Wise’s email and

28 ³⁹ Q2017MDL1_02697467.

⁴⁰ Q2017MDL1_03366056 at 57.

⁴¹ QNDCAL02273815.

⁴² QNDCAL02260676; QNDCAL02260673.

⁴³ QNDCAL02260676.

1 presentation also show Qualcomm explicitly acknowledging the role its monopoly power in chipset
2 supply plays in bolstering its royalty rates. Qualcomm ultimately chose not to separate the
3 businesses.

4 87. There is no valid procompetitive justification for the NLNC tying arrangement.
5 Qualcomm has claimed that the purpose of its NLNC policy is to ensure that OEMs do not infringe
6 its patents. However, Qualcomm is fully capable of seeking remedies for patent infringement under
7 patent law. There is nothing inherently efficient about using an extra-legal mechanism to obtain
8 more enforcement of a patent right than patent law provides. Moreover, if Qualcomm's true concern
9 were patent infringement, a far less restrictive alternative to its NLNC policy would be to require
10 OEMs to sign *FRAND* licensing agreements. Instead, Qualcomm has used the NLNC tying
11 arrangement to impose supra-*FRAND* licenses, which is unnecessary for the protection of
12 Qualcomm's alleged patent rights.

13 88. In defending its NLNC policy, Qualcomm has also argued that selling chipsets to
14 unlicensed purchasers will open Qualcomm up to opportunistic claims of patent exhaustion by
15 OEMs alleging that any sale of a chipset conveys with it all cellular SEPs necessary to use that
16 chipset.⁴⁴ However, as discussed above, Qualcomm could easily implement a lawful version of its
17 NLNC policy by requiring OEMs to enter into *FRAND* licenses, instead of requiring them to agree
18 to supra-*FRAND* licenses. And even if there were any merit to Qualcomm's argument that, in the
19 absence of NLNC, Qualcomm might be required to sell its chipsets exhaustively—meaning that
20 the sale of a chipset would, in and of itself, prevent Qualcomm from being able to collect a distinct
21 royalty payment from the buyer—then Qualcomm could simply price its chipsets to reflect both
22 the chipset price and the IP conveyed by the chipset sale, i.e. by incorporating its cellular SEP
23 royalties directly into the chipset price.

24 89. Qualcomm's anticompetitive conduct is unique in the industry. No other chipset
25 supplier has forced OEMs to take out separate patent licenses as a condition of component supply.

26
27
28 ⁴⁴ Cravath Br. to FTC at 4 (Dec. 20, 2016).

1 **E. Qualcomm Refuses to Deal with Its Rivals in Violation of FRAND.**

2 90. Qualcomm’s refusal to provide exhaustive licenses to rival chip suppliers has
3 exacerbated the anticompetitive effects of its No-License-No-Chips tie.

4 91. A FRAND license would give Qualcomm’s competing modem chip manufacturers
5 (and potential competitors) the right to market and sell authorized, unencumbered, patent-exhausted
6 modem chips. But Qualcomm refuses to license its SEP patents to competitors, even though
7 refusing to do so is unlawful and violates its FRAND obligations.

8 92. As Apple put it: “But-for Qualcomm’s FRAND evasion, Qualcomm would have
9 been forced to offer exhaustive patent licenses to its cellular SEPs on FRAND terms to
10 [competitors] Intel, Broadcom, and others. An exhaustive patent license to Qualcomm’s cellular
11 SEPs would have made these chipset suppliers more effective competitors to Qualcomm in the
12 chipset market, leading to lower prices ... to the benefit of Apple and ultimately of consumers.”⁴⁵
13 Samsung stated things even more succinctly: “because Qualcomm does not license competitors,
14 handset manufacturers have no choice but to accept Qualcomm’s onerous terms.”⁴⁶

15 93. Unless coerced, no purchaser of Qualcomm’s modem chips (or their downstream
16 customer) or licensee of Qualcomm’s SEPs would agree to such royalty rates untethered to
17 Qualcomm’s contribution to the cellular device’s price. In Apple’s words: “Qualcomm forced
18 purchasers of its chipsets to take a license to its SEPs at *extortion-level royalties* ... [and]
19 threaten[ed] ‘disloyal’ chipset customers with even less-favorable royalties and license terms if
20 they purchased chipsets from Qualcomm’s competitors[.]”⁴⁷ Samsung too confirms that Qualcomm
21 successfully leveraged its cellular SEPs to coerce OEMs to accept unreasonable licensing terms
22 that have anticompetitive, trade-restraining effects.⁴⁸ From Samsung’s perspective: “Qualcomm
23 coerces handset manufacturers to sign long-term licenses that disincentivize handset manufacturers

24 _____
25 ⁴⁵ Apple FAC ¶ 625.

26 ⁴⁶ Br. of *Amici Curiae* Samsung Elecs. Co. Ltd. & Samsung Semiconductor, Inc. in Opp’n to
27 Qualcomm Inc.’s Mot. to Dismiss 2, *FTC v. Qualcomm Inc.*, No. 5:17-cv-00220-LHK, ECF No.
28 99 (N.D. Cal.) (“Samsung Br.”).

⁴⁷ Apple FAC ¶ 52 (emphasis added).

⁴⁸ Samsung Br. at 7

1 from seeking alternative chipset suppliers and enable Qualcomm to extract monopoly profits from
2 the full handset *whether or not the value is derived from Qualcomm's SEPs.*"⁴⁹

3 94. Because Qualcomm withheld from all rival chipset makers the ability to pass-
4 through SEP rights to device makers, it prevented all those chipset makers from being able to offer
5 chipset sales that avoided the supra-FRAND tax on SEP licenses that was created by the No-
6 License-No-Chips tie.

7 95. Qualcomm's policy restrained the incentives for device makers to patronize rival
8 chipmakers, and the resulting reduction in rival chipmaker sales reduced their ability and incentives
9 to expand sufficiently to achieve efficiencies of scale, invest in research to drive the next generation
10 of chipset products, or enter the chipset business. Qualcomm's position atop the market also
11 deterred entry and encouraged exit.

12 96. Qualcomm's refusal to provide exhaustive licenses to rival chip suppliers also had
13 the effect of increasing the degree of monopoly power in chipsets that Qualcomm used to impose
14 the No-License-No-Chips tie.

15 97. Qualcomm's refusal to provide exhaustive licenses to its chipset rivals, in breach of
16 its FRAND duty to do so, thus anticompetitively harmed competition by exacerbating the exclusion
17 of these rivals from the market and increasing Qualcomm's ability to impose supra-FRAND rates
18 across the market.

19 98. Qualcomm's chip rivals have expressed concern about the impact of being "unable
20 to obtain an exhaustive license to sell modem chips from Qualcomm." Yooseok Kim (VP of
21 Samsung Electronics' IP Center) has testified that "If we didn't get the license I believe there would
22 be the IP-related risk, meaning that Qualcomm could make an assertion relating to their IP to
23 Samsung Electronics as well as customers of modem chips of Samsung Electronics."⁵⁰

24 99. Kim has also testified that when Samsung sold modem chips to Meizu, Qualcomm
25 sued Meizu for patent infringement, reflecting the very IP risk Kim was concerned about.⁵¹

26 ⁴⁹ *Id.* at 10.

27 ⁵⁰ Kim Dep. 140:11-141:9 (Mar. 21-22, 2018).

28 ⁵¹ *Id.* at 141:13-142:2.

1 100. Samsung has stated in a legal filing that, “as a direct consequence of Qualcomm’s
2 refusal to license,” it does not “sell licensed CDMA or premium LTE chipsets in competition with
3 Qualcomm.”⁵²

4 101. Finbarr Moynihan (GM of International Corporate Sales for MediaTek, a Taiwan-
5 based chip supplier) has also testified that one of the reasons MediaTek was seeking an exhaustive
6 license from Qualcomm was that their customers “were telling us that we needed a license from
7 Qualcomm. That’s probably the words they would have used. Because I think there was this belief
8 in the industry that the chipset companies also needed to be licensed from Qualcomm or a fear, on
9 behalf of the customers, that if they didn't -- if we didn't have a license from Qualcomm, they
10 wouldn't be able to procure and sell products with our chipsets in them.”⁵³

11 102. Qualcomm’s refusal to provide exhaustive licenses to rival chipmakers deterred
12 entry into the market.

13 103. For example, in 2011, Samsung considered entering into a joint venture with several
14 other companies for modem chip production codenamed “Project Dragonfly,” in which Samsung
15 would be the chip manufacturer.⁵⁴

16 104. Andrew Hong (Samsung’s Principal Legal Counsel for Global Legal Affairs
17 Division) has testified that “DoCoMo said Qualcomm offered nothing” with respect to a licensing
18 proposal.⁵⁵

19 105. Yooseok Kim (VP of the IP Center at Samsung) has testified that if DoCoMo had
20 been able to get the Qualcomm license, it would have “helped propel the chip business,” because
21 “it avoids the IP risk from Qualcomm. Then the -- as a foundry provider, System LSI [part of
22 Samsung’s Component Division] is safe with respect to the Qualcomm IP. So, that's the main
23 reason.”⁵⁶

24 _____
25 ⁵² Samsung Br. at 9.

26 ⁵³ Moynihan Dep. 380:3-19 (Mar. 12-13, 2018).

27 ⁵⁴ Hong Dep. 169:8-16 (Mar. 7-8, 2018); *see also* SFT-0036341.

28 ⁵⁵ Hong Dep. 140:23-141:11 (Mar. 7-8, 2018).

⁵⁶ Kim Dep. 19:12-22 (Apr. 13, 2016).

1 106. Qualcomm employees have likewise acknowledged that the refusal to provide
2 exhaustive licenses to rival chipmakers reduced their ability to compete with Qualcomm for chipset
3 sales.

4 107. For example, Steve Altman (former Vice Chairman and former President of
5 Qualcomm) wrote in a 1999 email: “I suspect that [the head of Qualcomm’s chip business] won’t
6 be happy if we agree to license Siemens,” and has testified that he believed the head would be
7 unhappy because that would result in “[p]robably just more competition for the chip business.”⁵⁷

8 108. Qualcomm’s own business practices also show that it recognizes the competitive
9 advantage of being able to convey patent rights as part of modem chip sales.

10 109. For example, Qualcomm executive Fabian Gonell, has testified that a document
11 entitled “Summary of Third Party IP Rights Benefiting Customers of Qualcomm’s MSMs and
12 Software” was provided to customers or potential customers at least until 2015 and that its purpose
13 was “[t]o provide a summary of rights that Qualcomm had that would benefit customers of
14 Qualcomm’s chips.”⁵⁸

15 110. When asked whether this meant “it outlined other companies’ patents to which the
16 rights were passed through by virtue of the purchase of a Qualcomm chip,” Mr. Gonell responded
17 that “the rights sometimes are in the form of the license to the chips, in which case, passthrough is
18 appropriate.”⁵⁹

19 111. Exhaustive licenses are valuable for chip suppliers to acquire from SEP holders with
20 large portfolios.

21 112. For example, Nokia has the second-largest share of declared UMTS SEPs
22 (Qualcomm has the third-largest), Nokia has the fourth-largest share of declared LTE SEPs
23 (Qualcomm has the third-largest), and Nokia has the third-largest share of declared CDMA2000
24 SEPs (Qualcomm has the largest).⁶⁰

25 _____
26 ⁵⁷ Altman Dep. 50:2-17 (Mar. 14-15, 2018).

27 ⁵⁸ Gonell Dep. (30b6) 168:2-11 (Apr. 20, 2018).

28 ⁵⁹ *Id.* at 168:12-169:1.

⁶⁰ Expert Report of Dr. Robert Akl ¶¶ 76-78 (Oct. 26, 2018).

1 113. Qualcomm’s former President Derek Aberle has testified that “if Nokia granted an
2 exhaustive license to Qualcomm for our components, there would be value in that, too, to
3 Qualcomm.”⁶¹

4 114. Qualcomm has also explicitly recognized that its SEP royalty rates to device makers
5 have been propped up by the tie of their licenses to Qualcomm’s chipset business.

6 115. Marvin Blecker (a former President of Qualcomm’s licensing division) stated in an
7 email that “we absolutely cannot give a chip supplier a full license to our IP with pass through
8 rights to his customers as that would have the potential of severely impacting our subscriber
9 licensing program.”⁶²

10 116. Similarly, when Intel requested an exhaustive license for Qualcomm’s CDMA SEPs
11 in 2004, Steve Altman (a former Vice Chairman and former President of Qualcomm) responded
12 that “QUALCOMM has not entered into any CDMA ASIC agreement that allows a CDMA ASIC
13 to be sold in a manner that provides, in an express or implied fashion, rights under any of
14 QUALCOMM's patents to a subscriber unit or infrastructure manufacturer that purchases such
15 CDMA ASIC,” and he stated that if Intel was proposing something inconsistent with Qualcomm’s
16 existing licensing practice, then “given the negative impact that it could have on QUALCOMM's
17 licensing program (which comprises a very substantial portion of the company's revenue and
18 profit), we cannot agree to this proposal.”⁶³

19 117. Accordingly, any harm to rival chipset businesses (e.g., through Qualcomm’s
20 refusal to provide exhaustive licenses to those rivals) would enhance Qualcomm’s market power
21 in chipsets and thus reinforce the No-License-No-Chips tie.

22 118. Had Qualcomm entered into exhaustive licenses to its SEPS on FRAND terms with
23 rival chip suppliers, then OEMs could have avoided Qualcomm’s supra-FRAND No-License-No-
24 Chips tie by purchasing chips directly from those rivals.

25
26 _____
27 ⁶¹ Aberle Dep. 236:6-11 (Oct. 6-7, 2016).

28 ⁶² Q2014FTC03400026.

⁶³ Q2014FTC04842228; *see also* Hayter Dep. 24:12-25:8 (Jan. 31, 2018).

1 119. Eric Reifschneider, former Qualcomm SVP and GM of Qualcomm’s licensing
2 division, stated with respect to exhaustion:

3 [T]he concern all along has been that, you know, if we license somebody to make a
4 chip and that chip contains the inventions in our patents, when they sell that chip to
5 somebody who's going to put the chip in a cell phone, okay, the licensee's sale of
6 that chip will exhaust our rights in our patents and then we won't be able to collect
7 a royalty on that patent from the guy who makes the cell phone. And that would be
8 a very bad thing because we collect a royalty on a cell phone that's based on the
9 price of the cell phone and that's a lot higher than the price of a chip. So given a
10 choice you are always going to want to collect a royalty on the cell phone, not on
11 the chip⁶⁴

12 120. Qualcomm’s refusal to license competing chip suppliers is calculated to create a
13 higher royalty base from downstream licensing on the end-user device: It knew it would not be able
14 to charge the same royalty at the chip level because the unfairness of the royalty would become
15 readily apparent. The former President of its licensing division recognized exactly this: If an
16 average royalty on a handset “were \$10.00, for example, you couldn’t charge a \$10.00 royalty on
17 a chipset that cost \$5.00 or \$6.00 or \$7.00,” in part because “it would be hard to convince a court
18 that that was a fair royalty.”⁶⁵

19 121. Rival chipmakers had strong disincentives to sue Qualcomm themselves for
20 Qualcomm’s refusal to license. Litigation is extremely costly, invites retaliatory measures, and has
21 uncertain outcomes. For example, when Broadcom brought suit against Qualcomm, Qualcomm
22 retaliated with infringement claims, the litigation cost was reportedly very high, and the eventual
23 settlement still did not result in Broadcom obtaining an exhaustive license for chipset supply.
24 Furthermore, litigation takes a company’s focus away from its business. As Intel employee and
25 former VIA Telecom executive Mark Davis explained, “everybody recognized that signing up to
26 these license agreements – that they were very onerous and unfair. ... [T]hat's what you had to sign,
27 because it's the only thing available. The only ... other option would be to start fighting. And then
28 you're really pursuing, you know, a legal business and not an engineering business.”⁶⁶

26 ⁶⁴ Q2017MDL1_02161041 at 54.

27 ⁶⁵ Q2017MDL1_02161041 at 79.

28 ⁶⁶ Davis Dep. 241:12-22 (Feb. 21, 2018).

1 122. Qualcomm’s systematic market-wide scheme to leverage its chipset monopolies into
 2 supra-FRAND royalties also would not have been readily apparent to others in the market, for two
 3 reasons. First, Qualcomm misled the market by publicly committing to license its cellular SEPs on
 4 FRAND terms—even though it did not do so. Second, Qualcomm’s agreements with OEMs
 5 contained confidentiality clauses that specifically prevented information on Qualcomm’s licensing
 6 practices from coming to light.

7 123. For instance, Qualcomm’s SULA with Samsung states that “each Party shall keep
 8 the terms of the License Agreement ... confidential and shall not disclose them to any Third
 9 Party.”⁶⁷

10 124. Qualcomm’s 2013 Business Cooperation and Patent Agreement with Apple states
 11 that Qualcomm can penalize Apple by withholding certain payments if Apple or its affiliates:

12 initiate any Litigation against a Qualcomm Party, or actively induce any third party
 13 to initiate Litigation against a Qualcomm Party, where such Litigation includes any
 14 claim that (a) a Qualcomm Party has failed to offer a license on FRAND or RAND
 terms and conditions or (b) the sale of a Qualcomm Component exhausts any of a
 Qualcomm Party’s patents...⁶⁸

15 Such clauses directly prevented Qualcomm’s market-wide implementation of supra-FRAND
 16 royalty rates from coming to light.

17 125. There is no procompetitive justification for Qualcomm’s licensing practices.

18 126. First, Qualcomm voluntarily agreed (by making the FRAND commitment) to
 19 engage in such multi-level licensing. If Qualcomm believed—as it has stated on some occasions—
 20 that multi-level licensing was inefficient, it could have declined to make any FRAND commitments
 21 requiring such licensing.

22 127. Second, Qualcomm collects billions of dollars in cellular SEP royalties. There is no
 23 reason to believe that licensing rival chip suppliers would materially increase transaction costs
 24 relative to the vast royalties at stake.

25 128. Third, other SEP holders *do* provide exhaustive licenses at a component level with
 26 chip suppliers, including with Qualcomm, demonstrating that the practice is not inefficient—

27 ⁶⁷ SFT-0000113 at 169 (Jan. 1, 2009).

28 ⁶⁸ APL-QC-FTC_00000036 at 41.

1 otherwise the other SEP holders would also choose to license the use of the chips only at the device
2 level.

3 **F. Qualcomm’s Exclusivity Agreements with Apple Exacerbate the**
4 **Anticompetitive Effects of Qualcomm’s Conduct.**

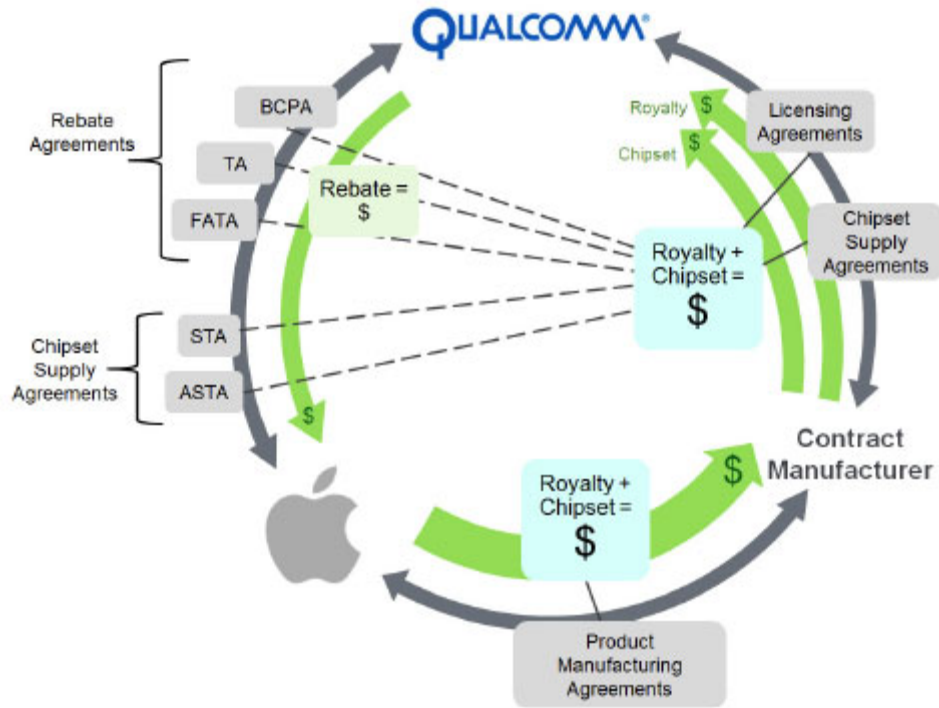
5 129. Qualcomm’s exclusive dealing arrangements with Apple further exacerbated the
6 anti-competitive effects of Qualcomm’s conduct.

7 130. Apple manufactures iPhones and iPads and is one of the largest purchasers of
8 modem chips in the world.

9 131. Apple employs contract manufacturers that assemble iPhones and iPads and who, in
10 turn, pay patent royalties to Qualcomm, passing the cost along to Apple. Apple then passes the cost
11 along to its customers, such as Plaintiffs Key, Russell, and Abernathy.

12 132. Apple repeatedly engaged in negotiations with Qualcomm concerning the excessive
13 royalties Qualcomm charged such contract manufacturers to license its SEPs. Qualcomm refused
14 to negotiate SEP royalty rates for licenses directly with Apple, preferring instead to impose those
15 rates directly on Apple’s contract manufacturers. Qualcomm compensated Apple on the back end,
16 providing Apple rebates, discounts, and other incentives to ensure Apple would continue to use
17 Qualcomm’s chips and that Qualcomm could continue its “No License, No Chips” policy.
18 Qualcomm also required that Apple’s contract manufacturers keep their license agreements with
19 Qualcomm secret, preventing Apple from determining how much in royalties Qualcomm was
20 charging.

21 133. According to Apple, the following diagram illustrated the complex web of contracts,
22 some of them secret, that underlie Qualcomm’s anticompetitive conduct relating to Apple:



134. In 2007, under their Marketing Incentive Agreement (“MIA”), Qualcomm agreed to pay marketing incentives to Apple in return for Apple’s agreement not to incorporate the proposed 4G WiMax cellular standard that Intel advocated and Qualcomm opposed. That action helped ensure the adoption of the 4G LTE standard that contained a higher percentage of Qualcomm’s SEPs and hobbled Intel, Qualcomm’s competitor.

135. In 2009, Qualcomm and Apple entered into the Strategic Terms Agreement (“STA”), which addressed the process by which Qualcomm supplied chips and associated software to Apple. That agreement restricted Apple’s ability to sue Qualcomm for patent infringement concerning Qualcomm chips. Although Apple generally negotiates firm supply commitments with its component vendors, Qualcomm refused to provide Apple such a commitment, instead arbitrarily capping its liability for the failure to supply and reserving for itself the ability to terminate its obligation to supply chips to Apple’s contract manufacturers. Qualcomm’s unilateral right to terminate the supply of chips to Apple’s contract manufacturers was retained in the Amended and Restated Strategic Terms Agreement (“ASTA”), effective February 28, 2013.

1 136. Qualcomm coerced Apple into entering into *de facto* exclusive dealing contracts
2 between at least 2011 and 2016.

3 137. In 2011, Qualcomm coerced Apple to enter into a Transition Agreement (“TA”).
4 Under the 2011 TA, Qualcomm agreed to make substantial incentive payments to Apple in
5 exchange for Apple agreeing to exclusively use Qualcomm chips in all new iPhone and iPad
6 models. Apple would forfeit all these incentive payments if it used any non-Qualcomm chips. This
7 threatened forfeiture tied to exclusivity was disguised by Qualcomm as a marketing payment paid
8 pursuant to the TA. These incentive payments were distinct from the incentive payments, or rebates,
9 Qualcomm provided Apple in furtherance of its “No License, No Chips” policy. As part of the TA,
10 Apple could not initiate any action or litigation against Qualcomm for intellectual property
11 infringement.⁶⁹

12 138. This agreement was modified in 2013 in the First Amendment to Transition
13 Agreement (“FATA”), so that it would continue through 2016. In the 2013 modification, however,
14 Qualcomm insisted on a new condition: Apple could neither initiate nor induce others to initiate
15 litigation based on Qualcomm’s failure to offer licenses on FRAND terms. According to Apple,
16 Qualcomm also agreed to make separate substantial incentive payments to Apple so long as Apple
17 exclusively sourced chips from Qualcomm. If Apple launched a new device with non-Qualcomm
18 chips, it would forfeit **past and future** incentive payments.

19 139. In Apple and Qualcomm’s 2013 Business Cooperation and Patent Agreement
20 (“BCPA”), Qualcomm agreed to make payments to Apple consistent with the marketing incentive
21 payments from the MIA, though smaller and renamed as BCPA Payments.

22 140. Qualcomm also leveraged its market power to coerce Apple to accept unreasonable
23 and anticompetitive licensing terms. Qualcomm refused to guarantee Apple a supply of chips,
24 arbitrarily limited its liability for failure to supply chips, and forced Apple to cross-license its own
25 patents to Qualcomm and Qualcomm licensees. In its later lawsuit against Qualcomm filed in 2017,
26 Apple stated that “[f]or several years, Qualcomm’s actions deterred Apple from switching to Intel’s

27 _____
28 ⁶⁹ Apple FAC ¶ 114.

1 or other potential competitors’ chipsets, substantially diminishing competition in the interim” and
2 that “[e]ven today, Qualcomm is actively engaging with network carriers in the United States,
3 attempting to persuade them not to support or sell Apple devices with Intel chipsets.”⁷⁰

4 141. Qualcomm’s 2011 and 2013 agreements with Apple were, and were intended by
5 Qualcomm to be, *de facto* exclusive deals that were as effective as express purchase requirements
6 and that essentially foreclosed Qualcomm’s competitors from gaining chip business at Apple, since
7 (a) Apple had at all relevant times an interest in developing and working with additional suppliers
8 of chips; (b) the large penalties Apple would face under its agreements with Qualcomm if it sourced
9 chips from another baseband supplier prevented Apple from using alternative suppliers during the
10 effective exclusivity period under these agreements; and (c) although a price-cost test is not
11 required to assess the competitive effects of Qualcomm’s agreements with Apple, the penalties
12 under these agreements are sufficiently large that, if they were attributed as discounts to the price
13 of Qualcomm chips reasonably contestable by a Qualcomm competitor, the resulting price of
14 Qualcomm’s processors would be below Qualcomm’s cost.

15 142. Because of this *de facto* exclusive dealing agreement, Apple sourced chips
16 exclusively from Qualcomm for all new iPads and iPhone products between October 2011 and
17 September 2016.

18 143. Qualcomm’s exclusive deal with Apple excluded competition from other chip
19 suppliers and harmed competition in the relevant chip markets. Apple is a particularly important
20 OEM from the perspective of a nascent supplier and confers significant benefits on a nascent
21 supplier that make the supplier a stronger contender for other OEMs’ business, including by selling
22 large volumes of chipsets, teaching suppliers through engagements, and allowing the supplier to
23 field test its technology in a real-world market.

24 144. Qualcomm’s exclusive agreements with Apple prevented Qualcomm’s competitors
25 from attaining these benefits and foreclosed a substantial share of the market for Premium LTE
26 chips.

27 _____
28 ⁷⁰ *Id.* ¶ 98.

1 145. Qualcomm’s conduct locked Intel out of Apple for four years causing Intel to lose
2 substantial revenues, the vital ability to scale to other customers more quickly, and the many
3 benefits that come from selling chips for use in Apple’s iPhone, the world’s most well-known and
4 commercially successful smartphone. The fact that Intel had, in 2017, begun supplying a portion
5 of the chips Apple incorporates in the iPhone 7 is a result of the fact that the many investigations
6 of Qualcomm’s illegal practices across the globe deterred Qualcomm from imposing additional
7 illegal exclusive deals on Apple. In 2019, Intel announced that it would no longer manufacture
8 modem chipsets after Qualcomm announced a settlement agreement with Apple.⁷¹

9 146. Qualcomm’s supply agreements with Apple also removed Apple from the field as a
10 potential modem chipset manufacturer in its own right. Apple is one of the world’s elite computer
11 hardware developers and designs a significant share of its own technology, including many of the
12 hardware components incorporated into its devices. Apple has used processor chips designed in-
13 house within the versions of its iconic iPhone handsets going back to 2010. Throughout the Class
14 Period, Apple faced progressively louder calls to develop its own modem chipsets in response to
15 the difficulties it faced in its dealings with Qualcomm.⁷² Qualcomm’s agreements with Apple, and
16 the “discounts” it conferred on Apple, actually benefitted Qualcomm by neutralizing Apple as a
17 potential entrant and competitor in the modem chipset space. By boosting royalty fees that it
18 partially masked through sham discounts, resulting in elevated costs that Apple then passed on to
19 its customers through higher device prices, Qualcomm acted as a monopolist paying a share of its
20 monopoly profits to Apple as a kickback for, in part, staying out of the modem chip market.

21 147. Qualcomm’s exclusivity agreements with Apple, including 2011 TA and 2013
22 FATA, also conditioned large lump-sum payments to Apple on Apple not launching any new
23 products that use non-Qualcomm chips.

24
25 ⁷¹ Rob McLean, “Intel Gets Out of the 5G Smartphone Modem Business,” CNN (Apr. 16, 2019),
26 <https://www.cnn.com/2019/04/16/tech/intel-leaves-5g-smartphone-modem-development/index.html> (last accessed June 8, 2022).

27 ⁷² *See, e.g.*, “Why Apple Should Design Its Own Baseband Chips,” FORBES (June 17, 2019),
28 <https://www.forbes.com/sites/greatspeculations/2019/06/17/why-apple-should-design-its-own-baseband-chips/?sh=29b2b1b149fd> (last accessed May 24, 2022).

1 148. A spreadsheet produced by Apple in response to an FTC Civil Investigative Demand
2 demonstrates the tremendous losses Apple potentially faced for breaking the exclusivity rules
3 Qualcomm imposed. Once it entered the TA in February 2011, Apple faced the prospect of
4 forfeiting \$1 billion in exclusivity payments if it decided to use a non-Qualcomm chipset in a new
5 product. At the end of February 2014, by which time Apple had entered into the FATA, Apple
6 faced the prospect of losing over \$2.5 billion in accrued and prospective payments for using a non-
7 Qualcomm chipset.⁷³

8 149. As a result of these agreements, Apple did not launch any products with a non-
9 Qualcomm modem chip until the iPhone 7 was released in late 2016.

10 150. The agreements Qualcomm imposed on Apple threatened enormous penalties for
11 not agreeing to be 100% exclusive, and thus constitute *de facto* exclusive dealing agreements rather
12 than—as Qualcomm might attempt to frame them—loyalty discounts.

13 151. The true nature of these deals is demonstrated by economic evidence. For instance,
14 a comparison of Qualcomm’s gross margin on its chipset sales to Apple versus those to
15 Qualcomm’s other top chipset customers shows that the payments to Apple under the 2011 TA and
16 2013 FATA were not true discounts, but rather a means for enforcing penalties in the event Apple
17 did not fully comply with exclusivity, and were therefore coercive.

18 152. During the time Apple was receiving exclusivity payments, Qualcomm’s chipset
19 revenue from Apple was higher than its revenue from any other OEM, demonstrating that Apple
20 was not receiving a discount for its exclusive chip sourcing from Qualcomm. And if Apple had
21 violated exclusivity and lost the conditional payments it was receiving, Qualcomm’s revenue and
22 profit margin on chips sold to Apple would have been even higher still. The exclusivity agreements
23 did not reward Apple with lower prices than those paid by Qualcomm’s other customers, but rather
24 coerced Apple to deal exclusively with Qualcomm by threatening Apple with prices well above
25 those paid by Qualcomm’s non-exclusive customers.

26
27 _____
28 ⁷³ Apple Response to FTC CID Specification 4 at Specification4.xlsx (Nov. 13, 2016); *see also* Expert Report of Einer R. Elhauge ¶¶ 123-26.

1 153. The fact that Qualcomm radically lowered its proposed chip prices for Apple in
2 response to competition from Intel when negotiating prices for modem chips toward the end of
3 2015 for the iPhone 7 further demonstrates that the payments to Apple under its exclusive dealing
4 agreements with Qualcomm were a means for enforcing coercive penalties rather than discounts.⁷⁴
5 Specifically, once Apple began dual-sourcing chips from Qualcomm and Intel, Apple was able to
6 negotiate chip prices with Qualcomm that saved it more money in chip costs than the amount that
7 Qualcomm was paying Apple under the exclusivity agreements. This demonstrates that the net
8 price Apple was paying under those agreements, taking into account the exclusivity payment from
9 Qualcomm, was actually higher than the price Apple would have paid without any exclusivity
10 commitment.

11 154. The fact that Apple signed these agreements does not make them voluntary or non-
12 coercive. The threat of a penalty is economically coercive, even if Apple could have walked away
13 and taken the penalty.

14 155. Moreover, these exclusive licensing deals were unnecessary. As Apple's 2017
15 lawsuit against Qualcomm (discussed below) revealed, much of Qualcomm's SEP strength was
16 illusory because it was premised on weak patents that in many cases do not even properly read onto
17 the standards at issue. However, because the Apple-Qualcomm agreements required Apple to forgo
18 any challenge to Qualcomm's IP holdings, the lawsuit proved an ineffective vehicle for subjecting
19 Qualcomm's patents to meaningful judicial scrutiny.

20 156. In early 2016, as the Apple-Qualcomm relationship began to sour and in the midst
21 of license renewal negotiations that had been underway for over a year, Qualcomm attested that it
22 had a "good-faith belief" that Apple products were infringing Qualcomm patents. Qualcomm stated
23 its belief was based on the fact that Apple's products were certified compliant with the 3G and 4G
24 standards and that Qualcomm "holds a great many patents that are essential to cellular standards
25 implemented by Apple products." Qualcomm refused to identify the specific Qualcomm IP
26 allegedly infringed or to substantiate its allegations, instead telling Apple only that Apple's

27
28 ⁷⁴ APL-QC-FTC_07606767.

1 products “necessarily practice every patent claim that is essential to any mandatory portions of that
2 standard.” At the same time, Qualcomm was persisting in demanding royalty payments for every
3 Apple device, to cover a license for all of Qualcomm’s technology, as opposed to specific patents.
4 Qualcomm repeatedly refused to answer Apple’s requests to disclose which patents Qualcomm
5 believed Apple practiced. At the end of 2016, Qualcomm finally provided Apple an infringement
6 analysis covering only 20 patents it had disclosed as SEPs to ETSI.

7 157. In January 2017, Apple filed a declaratory judgment action in the Southern District
8 of California seeking to have nine of the patents Qualcomm had disclosed to ETSI declared
9 exhausted, invalid, or not infringed. Tellingly, Qualcomm did not bring any counterclaims that
10 Apple had in fact infringed the nine patents-in-suit, but limited its counterclaims to those sounding
11 in contract, thus signaling Qualcomm’s belief that its own allegations of infringement were weak
12 and that it did not want the strength of its IP claims tested in court. As Apple would later allege:
13 “Qualcomm’s decision not to assert formal infringement counterclaims for [the patents-in-suit] is
14 part of Qualcomm’s improper efforts to evade its burden to show ... that it possesses a valid and
15 enforceable patent that is actually essential to the standard(s) to which Qualcomm has declared it,
16 which has not been exhausted by authorized sales of Qualcomm baseband chipsets, and that Apple
17 products infringe that patent.” Given Qualcomm’s allegation in that suit that it “holds a great many
18 patents that are essential to cellular standards implemented by Apple products,” Apple argued that
19 “Qualcomm must own some patents it is willing to put to the test”—but Qualcomm has repeatedly
20 declined to do so.⁷⁵

21 158. Using exclusivity with Apple to weaken, delay, or eliminate the ability of chipset
22 rivals to compete increased Qualcomm’s monopoly power in chipsets above but-for levels, and
23 thus increased chipset prices throughout the market. Further, because of the No-License-No-Chips
24 tie, Qualcomm’s increased monopoly power in chips also increased its ability to impose supra-
25 FRAND rates throughout the market on all cellular devices.

26
27
28 ⁷⁵ Apple FAC ¶ 145.

1 159. The ability to sell to Apple is critical to the ability to compete in the market for chip
2 sales. Apple globally has the largest share of phone sales, and Qualcomm itself recognizes Apple
3 and Samsung as the highest-tier OEMs. Apple has the resources to assist chip suppliers with
4 research and development (“R&D”) efforts to improve their product offerings, and selling to Apple
5 additionally lends legitimacy to a chipmaker and validates the chip supplier’s capabilities.

6 160. Qualcomm itself recognized that preventing rivals from dealing with Apple would
7 strategically benefit Qualcomm. Qualcomm CEO Steve Mollenkopf said, with respect to a proposal
8 to win 100% of Apple’s business, that “there are significant strategic benefits as it is unlikely there
9 will be enough standalone modem volume to sustain a viable competitor without that slot.” A June
10 2012 Qualcomm strategic plan states that Apple’s status as the “largest consumer of high-tier
11 modems” makes it a critically important customer, and that a modem supplier serving Apple could
12 use those chip sale revenues to “fund R&D to maintain leadership.”⁷⁶

13 161. The exclusivity agreements between Qualcomm and Apple did in fact exclude
14 competition for chip sales to Apple from Intel and other OEMs, impairing those rivals’ chipset
15 businesses and harming competition throughout the chipset market.

16 162. Tony Blevins, Apple’s VP of Procurement, testified that after signing the 2011
17 Transition Agreement, other chip suppliers “lost their fervor and excitement about working with
18 us” because “it became public knowledge that Apple had an exclusive relationship.”⁷⁷ Apple did
19 consider using Intel chipsets at various times, including for its 2d Generation iPad Mini, but
20 ultimately did not do so due to Qualcomm’s insistence on exclusivity and the financial penalties
21 for violating that exclusivity.

22 163. Apple stated in a Questionnaire Response to the European Commission: “Despite
23 earlier plans to use non-Qualcomm chipsets in 2015, Apple did not even issue an RFI or RFP to
24 chipset vendors for the 2015 iPhone and iPad lineup. Apple stood to lose over \$2 billion in
25 payments and reimbursements to Qualcomm if it used a non-Qualcomm chipset in its fall 2015
26 lineup of mobile devices. The looming threat of having to pay financial penalties ensured Apple

27 ⁷⁶ QNDCAL01049962.

28 ⁷⁷ Blevins Dep. 172:3-19 (Jan. 28, 2016).

1 would be exclusive to Qualcomm through at least 2015, despite the attractiveness of competitive
2 alternatives.”⁷⁸

3 164. Apple similarly stated in its Questionnaire Response to the European Commission
4 that “Apple’s inability to use non-Qualcomm chipsets contributed to the exit of several cellular
5 baseband chipset vendors from the industry in 2013 and 2014 (e.g., Renesas, Broadcom, ST-
6 Ericsson).”⁷⁹

7 165. Intel eventually winning the iPhone 7 business was a key factor in its decision to
8 bolster its CDMA capabilities by acquiring VIA Telecom in September 2015. Aichatou Evans,
9 Intel’s Corporate VP, testified with respect to Intel’s bids for Apple business in 2012 and 2013 that,
10 if Intel had been able to win Apple’s business earlier, it would have acquired VIA Telecom’s
11 CDMA technology sooner. Indeed, had Intel not been excluded from earlier WCDMA (UMTS) +
12 Premium LTE design wins, its CDMA business would have advanced at least two years earlier.⁸⁰

13 166. In addition to acquiring CDMA chipset capability sooner, Intel also would have
14 achieved more scale and innovation in both CDMA and Premium LTE chips had it not been
15 excluded by the Apple-Qualcomm exclusivity agreements. Evans testified to her “firm belief that
16 that exclusivity delayed us by two years in business, in creditability, in innovation, in getting to
17 market.”⁸¹

18 167. Intel’s iPhone 7 deal with Apple directly resulted in Intel having more scale and
19 benefited its competitiveness. For example, Intel’s ability to work with Apple advanced the
20 development of its modem functionality and attracted interest from additional OEMs in Intel’s
21 product offerings.

22 168. In sum, the Qualcomm-Apple exclusivity agreements prevented Intel from selling
23 chips to Apple, which in turn delayed Intel’s entry into the chipset market, weakened Qualcomm’s

24 ⁷⁸ FTC-PROD-0012101 at 3-4; APL-QC-FTC_17910720.

25 ⁷⁹ FTC-PROD-0012101 at 11.

26 ⁸⁰ Evans Dep. 347:20-348:5 (Mar. 14, 2018) (“Q: Now, would Intel have developed or acquired
27 this CDMA technology earlier if they had won this Apple socket in 2012 or 2013? A: Yes Q: And
why is that? A: For the same reason. The way I look at it is everything we ended up achieving and
accomplishing, if we had that socket in earlier, we would have executed to all that earlier.”).

28 ⁸¹ *Id.* at 108:9-18.

1 rival chipmakers, and drove Qualcomm’s rival chipmakers out of the chipset market. This reduction
2 in the ability or existence of chipset rivals increased Qualcomm’s monopoly power in chipsets,
3 which allowed Qualcomm to raise chipset prices throughout the market. This increase in its
4 monopoly also gave Qualcomm greater ability to use its No-License-No-Chips tie to impose above-
5 FRAND rates on SEPs throughout the market.

6 169. There is no pro-competitive justification for Qualcomm’s exclusivity agreements
7 with Apple. If Qualcomm had investments specific to chipsets sold to Apple that it wanted to
8 recoup, it could have used volume-based discounts or required reimbursement from Apple of
9 Apple-specific costs. It did not do so. Rather, it used coercive exclusive dealing arrangements to
10 solidify its monopoly power.

11 **G. Qualcomm Has Monopoly and Market Power in Relevant Markets.**

12 170. The relevant geographic market is worldwide. There are no material geographic
13 barriers to competition for modem chip sales and the cellular devices that incorporate those modem
14 chips.

15 171. The relevant markets for the tying products are (1) modem chips that comply with
16 CDMA standards⁸² (“CDMA chips”) and (2) modem chips that comply with advanced LTE
17 standards (“Premium LTE chips”). Qualcomm has monopoly power with respect to CDMA chips
18 and Premium LTE chips. Direct evidence of this power includes, among other things, evidence of
19 Qualcomm’s ability to use threatened loss of access to chips to extract supra-FRAND royalties on
20 mobile devices incorporating its own chipsets or the chipsets of its competitors.

21 172. The relevant market for the tied product is the market for cellular SEPs. All four
22 major U.S. cellphone networks operate on the cellular standards at issue (WCDMA/UMTS,
23 CDMA2000, and LTE), and Qualcomm owns SEPs for all three types of cellular standards. The
24 control of SEPs creates a potential to charge supracompetitive licensing fees. And Qualcomm’s
25 ability to charge a supra-FRAND royalty for its SEP licenses inherently demonstrates a market for
26 the tied product of Qualcomm’s SEPs.

27 _____
28 ⁸² The relevant CDMA standards include CDMAone and CDMA2000.

1 173. Qualcomm’s monopoly and market power is also established through circumstantial
2 evidence, including dominant shares of the relevant market with substantial barriers to entry. Chips
3 without CDMA functionality are not close enough substitutes to prevent Qualcomm from raising
4 all-in prices for CDMA processors. Similarly, chips without Premium LTE functionality are not
5 close enough substitutes to prevent Qualcomm from raising all-in prices for Premium LTE
6 processors.

7 174. Barriers to entry in such markets are significant, including the need to make
8 substantial, costly, and time-consuming investments in technology R&D; the need to develop
9 ongoing customer relationships with leading OEMs; certification requirements imposed by network
10 operators; and barriers to entry that Qualcomm itself has erected with its anticompetitive scheme,
11 including the effective tax that Qualcomm imposes on the chip sales of its competitors and potential
12 competitors and Qualcomm’s refusal to license its FRAND-encumbered SEPs to competitors.

13 175. Since the early 2000s, the cellular communications market in the United States has
14 been roughly evenly split between two families of second- and third-generation cellular standards:
15 Verizon and Sprint used the 2G CDMA and 3G CDMA2000 standards, while AT&T and T-Mobile
16 have used 2G GSM and 3G WCDMA standards. 2G CDMA and 3G CDMA2000, developed by
17 Qualcomm, are the second and third generation of the CDMA standard Qualcomm developed in
18 the 1990s. These CDMA standards and the GSM/WCDMA standards are not compatible with each
19 other.

20 176. Carriers cannot substitute between the 3G CDMA2000 and 3G WCDMA
21 technology because they built their wireless networks to support only one of the two incompatible
22 standards. In the United States alone, Verizon and Sprint invested more than \$57 billion in their
23 CDMA-based networks over the decade from 2000 to 2010.

24 177. The process of switching from 3G CDMA networks to 3G WCDMA networks
25 would also be costly for individual consumers because “canceling service on one carrier and going
26 to another carrier leads to expensive early termination fees”—a point Qualcomm itself made in a
27 submission to the USITC.

28

1 178. There is also a fourth-generation standard known as 4G LTE. The initial deployment
2 of 4G LTE in the United States was primarily for data services in urban markets, but compatibility
3 with the existing 3G network standards was still required the make voice phone calls. This left both
4 carriers and consumers “locked in” to the existing “legacy” 3G CDMA2000 and 3G WCDMA
5 standards in order to guarantee the continued ability to make voice calls.

6 179. To take advantage of economies of scale and spread fixed development costs over
7 as many sales as possible, OEMs have developed new mobile devices with hardware and software
8 that can, with minimal modification, be deployed on both CDMA and non-CDMA networks. For
9 example, Apple uses identical versions of major hardware and software inputs in its phones
10 destined for networks using either of the communications standards, and it tracks models used on
11 different carrier networks using overarching internal names.

12 180. OEMs’ phones sold by Verizon for use on its 3G CDMA2000-based network and
13 sold by AT&T for use on its 3G WCDMA-based network tend to have as many similar components
14 as possible to keep design costs low and to ensure they have similar performance and similar
15 features. This desire for similar performance and features results in a tendency to use the same
16 suppliers in the design for phone variants destined for both 3G CDMA2000-compatible and 3G
17 WCDMA-compatible networks, even when the primary data service to be used is 4G LTE.

18 181. The baseband processor (or modem chip or chipset) is the critical component in
19 phones that handles cellular communications with wireless carriers’ networks. A phone without a
20 baseband processor would be unable to make voice calls or send or receive data, except when
21 connected to a wifi network.

22 182. The research, development, and engineering required for a new baseband processor
23 design is very costly and requires firms to achieve economies of scale in order to be sufficiently
24 profitable to survive in the industry. A new baseband processor design costs “hundreds of millions
25 of dollars in sunk costs to develop the initial platform and for each product generation” and requires
26 “thousands of experienced engineers.”⁸³ [REDACTED]

27
28 ⁸³ FTC-PROD-0021856-FTC-PROD-0021891 at 1861.

1 [REDACTED]
2 [REDACTED]
3 [REDACTED].⁸⁴ In addition to these
4 costs, “[t]o maintain sufficient scale for required R&D, a chipset supplier needs to have a 50%+
5 share at a leading OEM and substantial sales to other OEMs.”⁸⁵ [REDACTED]
6 [REDACTED]

7 [REDACTED].⁸⁶ Clearly, obtaining economies of scale is
8 required to be a baseband processor vendor, and the high fixed R&D and engineering costs are
9 significant barriers to entry.

10 183. The lengthy time from phone OEM design start to first market shipment means that
11 entry into the baseband processor market is both very costly and highly risky. As Qualcomm itself
12 testified in 2007 before the USITC, “even if another company, such as Broadcom, were to win
13 tomorrow the right to provide a handset maker with a WCDMA baseband chip, that handset would
14 not be available to the market for approximately eighteen to twenty-four months.”

15 184. A baseband vendor achieves economies of scale through commonality between its
16 baseband processors, allowing R&D costs to be spread across as many units as possible. Qualcomm
17 now has CDMA2000 and WCDMA functionality in all of its baseband processors.

18 185. Qualcomm’s high worldwide market share in CDMA chips provides compelling
19 evidence of its monopoly power. Qualcomm’s market share for all CDMA chips was **94% or**
20 **higher** each year during the Class Period. In 2018, it was **99%**.⁸⁷

21 186. All parties testifying before a USITC proceeding, including Qualcomm itself,
22 recognized that Qualcomm had an effective monopoly on 3G chipsets conforming to the 3G
23 CDMA2000 standard.

24
25 _____
26 ⁸⁴ Q2014FTC03666113 at 14.

27 ⁸⁵ FTC-PROD-0021856-FTC-PROD-0021891 at 1861.

28 ⁸⁶ Straub Dep. 93:25-94:11 (Mar. 30, 2016).

⁸⁷ Expert Report of Kenneth Flamm ¶ 45 (Oct. 26, 2018).

1 187. In testimony before the USITC in 2007, Qualcomm acknowledged its own effective
2 monopoly on 3G CDMA-compatible chipsets going back to when 3G CDMA was initially being
3 deployed. Citing the testimony of its economic expert, Professor Hausman:

4 There is nothing to fill the technological void that would be left if Broadcom obtains
5 the remedies it seeks [including exclusion from the U.S. of mobile phones
6 containing Qualcomm 3G CDMA chipsets]. “QUALCOMM is the full worldwide
7 EV-DO [3G CDMA] supplier.... There is no known alternative chip under
8 development. Hausman, Tr. 467-68. See RD at 301-304. Moreover, 1x-RTT
9 compatible handsets and GSM/WCDMA devices, are not viable alternatives to EV-
10 DO-capable handsets. 1x-RTT technology is outdated and it is five times less
expensive to transmit data over an EV-DO network than a 1x-RTT network. Also,
an EV-DO network offers speeds five to eight times faster than speeds offered by a
1x-RTT network. EV-DO technology. [sic] As for CDMA technology, EV-DO is
the only broadband alternative for consumers in the U.S. that have elected CDMA
technology.⁸⁸

11 188. As noted in a 2006 decision by the USITC’s administrative law judge, “Broadcom
12 does not dispute that, currently, there are no commercially available alternatives to Qualcomm’s
13 EV-DO chips and that Qualcomm is a virtual ‘monopolist’ when it comes to baseband
14 processors....”⁸⁹ USITC staff concurred: “Staff asserts that it is undisputed that there are currently
15 no other chips that support the EV-DO standard besides the accused chips....”⁹⁰ This situation
16 persisted. In a 2011 decision, the USITC noted that “Qualcomm contends that there is no source of
17 non-infringing chips for use in EV-DO capable devices....”⁹¹

18 189. Qualcomm’s effective monopoly position in baseband processor chips that are
19 backward-compatible with the 3G CDMA standard continued after 2011 and throughout the Class
20 Period.

21 190. In its 2011 decision, the USITC noted that Qualcomm itself recognized the
22 substantial market power it had secured in WCDMA chips: “Qualcomm argues finally that there
23

24 ⁸⁸ Qualcomm Submission to U.S. Int’l Trade Comm’n (USITC) at 18 (2007).

25 ⁸⁹ USITC, In the Matter of Certain Baseband Processor Chips and Chipsets, Transmitter and
26 Receiver (Radio) Chips, Power Control Chips, and Products Containing Same, Including Cellular
Telephone Handsets, Investigation No. 337-TA-543, vol. 2 of 2, Publication 4258, October 2011,
at 301.

27 ⁹⁰ *Id.* at 303.

28 ⁹¹ *Id.* at 301.

1 are no alternative WCDMA chips in the United States marketplace today, that it is the sole supplier
2 of WCDMA baseband chips for the United States WCDMA market, and that it would take
3 [REDACTED] for another WCDMA manufacturer to bring an alternative handset to market.”⁹² In
4 that same decision, the USITC found that “there are no known alternatives for EV-DO chips or the
5 downstream products that contain them, and only limited alternatives for WCDMA chips and the
6 products containing them.”⁹³

7 191. Qualcomm continued to maintain substantial monopoly power in the highest
8 performance next-generation baseband processors compatible with the 4G LTE standard
9 throughout the Class Period. This is demonstrated, for instance, by Qualcomm’s high market share
10 in the market for LTE chips used in premium handsets (those with average selling prices of over
11 \$300 for 2012 and earlier, and average selling prices of over \$400 for 2013 and after). From 2011
12 to 2015, Qualcomm had 90% or more of the market share in Premium LTE. From 2016 to 2018,
13 Intel slowly began to gain market share, but Qualcomm continued to hold a significant majority of
14 the Premium LTE market share. This market dominance supports the existence of Qualcomm’s
15 unlawful monopoly power.⁹⁴

16 192. Qualcomm’s unlawful monopoly power is also evidenced by its demands for a
17 royalty rate based on the entire wholesale price of the phone or tablet, especially when compared
18 to other technology companies whose business model depends on licensing SEPs.

19 193. For example, ARM Holdings (“ARMH”) holds a large number of SEPs related to
20 the 802.11 wireless standards, which is incorporated into a wide variety of devices that have
21 wireless networking features. But unlike Qualcomm, ARMH charges a royalty rate based on the
22 price of the specific chips that rely on ARMH’s SEPs, not on the price of the entire finished device.
23 The modem chip supplier Marvell uses ARMH’s SEPs in wifi chips it produces for incorporation
24

25 ⁹² USITC, In the Matter of Certain Baseband Processor Chips and Chipsets, Transmitter and
26 Receiver (Radio) Chips, Power Control Chips, and Products Containing Same, Including Cellular
Telephone Handsets, Investigation No. 337-TA-543, vol. 1 of 2, Publication 4258, October 2011,
at 90.

27 ⁹³ *Id.* at 120.

28 ⁹⁴ *See* Expert Report of Kenneth Flamm, § II.E (Oct. 26, 2018).

1 into the Microsoft Xbox. ARMH charges a 1% royalty rate that is calculated based on the price of
2 Marvell's chips, not the cost of the entire finished Xbox device. By contrast, Qualcomm charges a
3 royalty rate of as much as 5% of overall wholesale price of a finished device, which is usually in
4 the hundreds of dollars, even though Qualcomm's chips by themselves sell for only \$10 to \$20.
5 This is an anticompetitive practice that results in Qualcomm significantly overcharging OEMs,
6 especially OEMs that offer feature-rich phones or tablets at higher selling prices. These overcharges
7 are entirely foreseeably passed on to the OEMs' customers, and ultimately to consumers.

8 194. Qualcomm's as much as 5% royalty rate is itself evidence of Qualcomm's
9 anticompetitive behavior. Had Qualcomm abided by its FRAND obligations, its royalty rate would
10 have declined over time because of its declining contribution to the SEPs applicable to cellular
11 devices, which have added more and more features unrelated to cellular network connectivity
12 (which Qualcomm's patents read on). Because of this, Qualcomm's SEPs contribute far less to the
13 value of a 2018 phone than they did to the value of a 2006 phone. Nonetheless, throughout that
14 time period, Qualcomm continued to collect cellular SEP royalties based on a standard 5% of the
15 total price of finished devices.

16 195. 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.

20 196. In 2013 and 2014, Qualcomm collected licensing revenues of approximately \$7.8
21 billion, an amount equivalent to approximately 2% of total worldwide cell phone sales. During the
22 same two years, the four other companies with similar SEP portfolios—Alcatel-Lucent, Ericsson,
23 InterDigital, and Nokia—collected a combined total of \$2.7 billion in licensing revenue, an amount
24 equivalent to approximately 0.7% of total worldwide cell phone sales.

25 197. The maximum FRAND rate applicable to the 15 OEMs making up the vast majority
26 of Qualcomm's U.S. royalty-bearing sales ranges from [REDACTED]. Yet Qualcomm
27 represented to Huawei during license negotiations that Qualcomm charged Samsung an effective
28 royalty rate—after consideration of other forms of compensation, such as patent transfers, license

1 grant-backs, and other commercial commitments—of approximately █%, and stated that Samsung
2 had the “best [royalty rate]/deal” of any Qualcomm licensee.⁹⁵

3 198. Assuming an effective royalty rate of at least █% for each OEM licensed by
4 Qualcomm, the overcharge paid by those OEMs (and ultimately by consumers) exceeds \$9
5 billion.⁹⁶

6 **H. Qualcomm’s Anticompetitive Conduct Harms Consumers.**

7 199. Qualcomm’s anticompetitive conduct directly injures consumers in product markets
8 for cellular devices like smartphones and tablets that incorporate modem chips. Qualcomm’s
9 anticompetitive practice means that the all-in price of any modem chip now consists of (i) the price
10 paid by the OEM for the modem chip itself; (ii) a FRAND royalty, which the OEM must pay to
11 Qualcomm to practice Qualcomm’s SEPs; and (iii) an added surcharge, which the OEM must pay
12 to Qualcomm in order to ensure continued access to Qualcomm’s modem chip supply.

13 200. California’s antitrust laws “are designed primarily to aid the consumer” and are
14 focused on harm to consumers in the relevant geographic markets. *See Flagship Theatres of Palm*
15 *Desert, LLC v. Century Theatres, Inc.*, 55 Cal. App. 5th 381, 420-22 (2020). The relevant antitrust
16 harm under California law is “harm to competition in a manner that negatively affects ‘the
17 consuming public.’” *Id.* at 420. “Of course, to the extent the elimination of a competitor or harm to
18 a single competitor *also* harms consumers—that is, where the challenged practice has a ‘deleterious
19 effect both on competitors *and* consumers’—such an effect constitutes competitive harm.” *Id.* The
20 focus for California law is the “actual adverse effect on competition as a whole in the relevant
21 market.” *Id.* at 418 (citing *Capital Imaging v. Mohawk Valley Med. Assoc.*, 996 F.2d 537, 543 (2d
22 Cir. 1993).

23 201. Here, the inflated all-in cost of a modem chip raised the prices consumers pay for
24 cellular devices and thereby harmed consumers. Qualcomm’s conduct also had an adverse effect
25

26
27 ⁹⁵ Q2014FTC03974334-338 at 335-336.

28 ⁹⁶ Expert Report of Michael Lasinski ¶ 183 (Oct. 26, 2018).

1 on competition as a market as a whole, as Qualcomm inhibited or forced every major competitor
2 in the market to exit and systematically reduced competition and innovation.

3 202. The cellular device market is inextricably intertwined with the CDMA and Premium
4 LTE chip markets, as shown by the facts that (1) Qualcomm uses its market power in chipsets to
5 extract anticompetitive licensing terms for its SEPs, (2) such licensing terms include charging a
6 separate royalty as a percentage of the wholesale price of the cellular device rather than the price
7 of the chip, and (3) such a royalty directly inflates the price of cellular devices purchased by
8 consumers, such as Plaintiffs and Class members.

9 203. The cellular device industry is extremely competitive with OEMs competing on both
10 price and features.

11 204. OEMs carefully evaluate the cost of producing various phone configurations. For
12 example, a 110-page Motorola document entitled “ [REDACTED] ” evaluated the relative
13 costs and qualities of alternative phone specifications. [REDACTED]

14 [REDACTED]
15 [REDACTED].⁹⁷

16 205. Apple executives also testified that they have a [REDACTED]
17 [REDACTED]”⁹⁸ As part of this process, Apple
18 simulates the cost of its suppliers to set the price of the product sold.

19 206. Numerous witnesses from OEMs testified regarding the effect that Qualcomm’s
20 overcharges had on the quality-adjusted prices of cellular phones.

21 207. For example, Motorola’s Todd Madderom testified that the inflated manufacturing
22 cost per unit for Motorola caused by Qualcomm’s conduct caused Motorola to reduce the features
23 that it included in its handsets. Apple’s Tony Blevins testified that Qualcomm’s royalty limited the
24 features that Apple could include in its phones. Internal Apple documents show that [REDACTED]

25
26
27 ⁹⁷ MOTO-QUALSUB-01178505.

28 ⁹⁸ Williams Dep. 19:8-24 (Sept. 16, 2016).

1 [REDACTED]

2 [REDACTED].⁹⁹

3 208. There is similar testimony on cost-consciousness and trade-offs from Sony, LG,

4 Blackberry, Huawei, Samsung, and several other OEMs.¹⁰⁰

5 209. OEMs' pursuit of even small cost savings is illustrated by many Qualcomm

6 documents. Qualcomm's internal documents show that OEMs pursued small cost breaks by

7 purchasing defeatured chips at slightly lower prices. In responses to the European Commission,

8 Qualcomm stated that it may give chipset purchasers discounts or other rebates if the purchaser

9 does not use the full functionality of the Qualcomm chipset.

10 210. The testimony indicates that OEMs would regularly make trade-offs among

11 components to make sure that they had the most economically competitive set of features being

12 incorporated into phone models sold in particular price bands.

13 211. Qualcomm's own documents illustrate how cell phone manufacturers would have

14 chosen higher-quality components in the but-for world. As a senior Qualcomm employee testified,

15 if OEMs are able to purchase a lower-priced modem chip, the OEM could "do whatever they want

16 with that savings. They can -- they can spend it on other features; they can spend it on marketing;

17 they can provide a lower-priced device to a consumer."¹⁰¹

18 212. Using data produced in this litigation on phone prices and costs matched with

19 product characteristics from industry sources, Plaintiffs' expert, Dr. Kenneth Flamm, developed

20 pass-through rates for seven different market segments: CM/ODM, OEMs, Carriers, Carriers via

21 Retail, Distributor, Retail Prepaid/Unlocked, and Retail Postpaid. Dr. Flamm used hedonic price-

22 cost (pass-through) regressions to measure the extent to which changes in component costs for

23 cellular phones would be passed through the distribution chain in the form of changes to the quality-

24 adjusted prices that consumers pay. Changes to quality-adjusted prices are a combination of

25 changes in nominal prices and changes in the quality characteristics of components making up a

26 ⁹⁹ *Id.*; Q2014FTC_3DP_00001128-175 at 133.

27 ¹⁰⁰ See Expert Report of Kenneth Flamm, § D.1-4 (Oct. 26, 2018).

28 ¹⁰¹ Kressin Dep. 418:4-10 (Feb. 8, 2018).

1 device, as Dr. Flamm explains in detail in his merits report.¹⁰² When weighted together by supply
 2 channel volume of sales, Dr. Flamm concluded that 93.2% of Qualcomm’s overcharges were
 3 passed through to consumers.¹⁰³

4 213. Dr. Flamm also evaluated and identified internal Qualcomm documents stating
 5 Qualcomm’s expressly understood objective of raising the prices OEMs charge to end users, and
 6 Qualcomm’s success in achieving this objective. The end users, as victims of an anticompetitive
 7 scheme, are entitled under California law to restitution and/or compensation for the unlawful
 8 overcharges they paid. To be clear, the end users were not victimized by Qualcomm’s conduct due
 9 to inadvertence or bad luck; rather, they were Qualcomm’s intended victims, directly targeted by
 10 Qualcomm.

11 **I. Qualcomm Fraudulently Concealed its Anticompetitive Conduct and**
 12 **Plaintiffs Could Not Reasonably Have Discovered It Earlier.**

13 214. Qualcomm fraudulently concealed its anticompetitive conduct, including its failure
 14 to abide by its FRAND commitments, its “No License, No Chips” policy, and its anticompetitive
 15 and exclusionary agreements with Apple. Plaintiffs could not reasonably have discovered
 16 Qualcomm’s unlawful and anticompetitive conduct until the FTC and Apple filed suit against
 17 Qualcomm in 2017.

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

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

27 ¹⁰² Expert Report of Kenneth Flamm, § III.A (Oct. 26, 2018).

28 ¹⁰³ *Id.* § III.I.

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

7 217. Qualcomm also took additional affirmative steps to keep its anticompetitive conduct
8 secret and affirmatively mislead the public. Apple alleges that as a condition of giving Apple even
9 partial relief from its non-FRAND royalties, Qualcomm sought to gag Apple and prevent it from
10 bringing its concerns to law enforcement or challenging Qualcomm's compliance with FRAND
11 commitments. Apple alleges that through the second paragraph of Section 7 of the Apple-
12 Qualcomm BCPA, Qualcomm conditioned the BCPA payments on a provision that restricted Apple
13 from initiating or inducing certain legal actions in three identified areas: (a) assertion of patents
14 against Qualcomm; (b) claims that Qualcomm failed to offer a license to its SEPs on FRAND terms;
15 and (c) claims that Qualcomm's patent rights were exhausted. While the BCPA contains a generic
16 acknowledgement of Apple's legal responsibility to respond to enforcement agencies' requests for
17 information, the BCPA effectively restrains Apple from bringing concerns to such agencies or
18 providing them with effective assistance in investigations into Qualcomm because of the BCPA
19 provisions that condition Apple retaining billions of dollars on Apple keeping quiet about
20 Qualcomm's business practices. Indeed, Qualcomm has interpreted the BCPA as allowing it to take
21 retaliatory measures against Apple for responding to competition agencies' requests for information
22 about Qualcomm's practices, thereby inhibiting law-enforcement review of Qualcomm's
23 anticompetitive practices.

24 218. As Apple alleged in its own lawsuit, "[i]n at least one such agreement, Qualcomm
25 inserted a gag order that prevented an aggrieved party from seeking relief that could curb
26 Qualcomm's illegal conduct, in an effort to keep courts and regulators in the dark and its coerced
27
28

1 customers quiet.”¹⁰⁴ Apple further alleged that Qualcomm offered it a bribe of “nearly \$1 billion”
 2 if Apple “retracted and corrected its statements to government agencies and instead gave false
 3 testimony favorable to Qualcomm.”¹⁰⁵

4 219. Plaintiffs did not have actual or constructive knowledge of Qualcomm’s
 5 anticompetitive behavior and acted diligently in bringing this lawsuit shortly after Qualcomm’s
 6 exclusionary agreement with Apple, its non-FRAND licensing, and its “No License, No Chips”
 7 policy came to light when the FTC filed a complaint against Qualcomm in 2017.

8 220. For the same reasons, Plaintiffs did not discover, and could not reasonably have
 9 discovered, Qualcomm’s anticompetitive conduct (which form the basis for their California state-
 10 law claims) until the FTC filed its complaint in 2017. Although Korean and Chinese competition
 11 authorities had previously investigated Qualcomm’s actions, Plaintiffs could not reasonably have
 12 known that Qualcomm was committing the antitrust violations alleged herein in the United States
 13 until the FTC complaint was filed.

14 221. After Plaintiffs filed their lawsuit, a separate enforcement action against Qualcomm
 15 started in the United Kingdom. In May 2022, in that action, a UK tribunal issued a judgment making
 16 a collective proceedings order (i.e., equivalent to an order granting class certification) authorizing
 17 a representative class action on behalf of 29 million consumers who have made UK purchases of
 18 LTE-enabled Apple and Samsung smartphones since October 1, 2015, and who have lost an
 19 estimated £482.5 million (approximately \$600 million) due to the effect of Qualcomm’s
 20 anticompetitive practices, which includes the conduct alleged herein, in the UK cellular device
 21 market alone.¹⁰⁶

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

24
 25
 26 ¹⁰⁴ Apple FAC ¶ 1.

27 ¹⁰⁵ *Id.* ¶¶ 231-32.

28 ¹⁰⁶ *See Consumers’ Ass’n v. Qualcomm Inc.*, No. 1382/7/7/21, Judgment (Application for a
 Collective Proceedings Order) (May 17, 2022), *available at* <https://tinyurl.com/3xynmm75>.

1 223. As a result, the Class Period in this case dates back at least to February 11, 2011,
2 notwithstanding any shorter limitations period that might otherwise apply.

3 **V. CLASS ACTION ALLEGATIONS**

4 224. Plaintiffs bring this case on behalf of themselves and as a class action under Federal
5 Rule of Civil Procedure 23(b)(2) and 23(b)(3) on behalf of all members of the following Class (the
6 “California Class”):

7 All natural persons and entities who purchased, paid for, and/or provided
8 reimbursement for some or all of the purchase price for all UMTS, CDMA
9 (including CDMAone and CDMA2000) and/or LTE cellular devices (“Relevant
10 Cellular Devices”) for their own use and not for resale from February 11, 2011,
11 through September 27, 2018 (the “Class Period”) in California. This class excludes
12 (a) Defendant, its officers, directors, management, employees, subsidiaries, and
13 affiliates; (b) all federal and state governmental entities; (c) all persons or entities
14 who purchased Relevant Cellular Devices for purposes of resale; and (d) any judges
15 or justices involved in this action and any members of their immediate families or
16 their staff.

17 225. Qualcomm has through its conduct as described herein acted on grounds that apply
18 generally to the Class, so that final injunctive relief and corresponding declaratory relief is
19 appropriate respecting the Class as a whole.

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

23 227. Common questions of law and fact exist as to all members of the Class and
24 predominate over any individualized issues or questions. Such common questions of law and fact
25 include but are not limited to:

- 26 a. Whether Qualcomm violated California’s Cartwright Act, Cal. Bus. & Prof.
27 Code § 16700, *et seq.*;
- 28 b. Whether Qualcomm violated California’s Unfair Competition Law, Cal.
Bus. & Prof. Code § 17200, *et seq.*;
- c. Whether Qualcomm possessed monopoly power over the CDMA and
Premium LTE chip markets during the Class Period;
- d. Whether Qualcomm willfully acquired or maintained monopoly power over
the CDMA and Premium LTE chip markets during the Class Period;

- 1 e. Whether Qualcomm unlawfully tied the sale of its modem chips to the
- 2 licensing of its intellectual property (including SEPs and non-SEPs);
- 3 f. Whether Qualcomm unlawfully tied the licensing of SEPs with the licensing
- 4 of non-SEPs;
- 5 g. Whether Qualcomm unlawfully coerced purchasers of its modem chips to
- 6 adhere to anticompetitive and/or supracompetitive sales terms;
- 7 h. Whether Qualcomm unlawfully coerced licensees of its SEPs to adhere to
- 8 anticompetitive and/or supracompetitive licensing terms;
- 9 i. Whether Qualcomm violated its duty to deal by refusing to license its
- 10 FRAND-encumbered SEPs to its modem chip competitors;
- 11 j. Whether Qualcomm extracted unlawful royalty payments from purchasers
- 12 of modem chips (and their downstream customers) who incorporated the
- 13 chips into finished cellular devices;
- 14 k. Whether Qualcomm's SEPs for the relevant cellular communications
- 15 standards are fully embodied within Qualcomm's modem chips such that
- 16 Qualcomm's rights in the patents are exhausted when Qualcomm sells its
- 17 chips;
- 18 l. Whether Qualcomm's agreements related to the sale of its chips constitute
- 19 unlawful combinations in restraint of trade or commerce;
- 20 m. Whether Qualcomm's agreements related to the licensing of its SEPs
- 21 constitute unlawful combinations in restraint of trade or commerce;
- 22 n. Whether Qualcomm's unlawful conduct enabled Qualcomm to increase,
- 23 maintain, or stabilize above competitive levels the prices it charges for patent
- 24 licenses on its cellular SEPs and/or the all-in prices it charges for its UMTS,
- 25 CDMA, and LTE modem chips;
- 26 o. Whether the inflated prices were passed on to Class members;
- 27 p. Whether Qualcomm caused Class members to pay artificially-high,
- 28 supracompetitive prices for Relevant Cellular Devices, and thus to suffer

1 injury, when Qualcomm: (1) unlawfully reduced and eliminated competition
 2 in the relevant modem chip markets, (2) charged artificially-high,
 3 supracompetitive prices for its modem chips, (3) required artificially-high,
 4 supracompetitive rates to license its cellular SEPs, (4) refused to license its
 5 SEPs to its chip competitors, despite its FRAND obligations to the contrary;
 6 and (5) required OEMs to pay non-FRAND royalties;

7 q. The effect of Qualcomm's conduct on the price of Relevant Cellular Devices
 8 during the Class Period;

9 r. Whether Qualcomm's conduct caused injury to Class members' business or
 10 property;

11 s. Whether Qualcomm unjustly enriched itself to the detriment of Class
 12 members, thereby entitling Class members to disgorgement of all benefits
 13 derived by Qualcomm;

14 t. The appropriate form and scope of injunctive relief necessary to prohibit
 15 further and future injury to Class members from Qualcomm's unlawful
 16 conduct;

17 u. The appropriate measure and amount of damages sufficient to compensate
 18 the Class for its injuries suffered because of Qualcomm's unlawful conduct;
 19 and

20 v. The nature, form, and amount of the equitable relief necessary to restore the
 21 inequities now existing in Qualcomm's favor and to the Class's detriment
 22 caused by Qualcomm's unlawful conduct.

23 228. Plaintiffs' claims are typical of the claims of the members of the Class. Plaintiffs
 24 purchased Relevant Cellular Devices during the Class Period for their own use and not for resale.
 25 Plaintiffs and all Class members suffered similar injuries during the Class Period because they all
 26 paid artificially inflated, supracompetitive prices for Relevant Cellular Devices caused by the same
 27 course of unlawful, unfair, and anticompetitive conduct committed by Qualcomm. Therefore,
 28 Plaintiffs' interests are coincident with and not antagonistic to the claims of all Class members.

1 229. Plaintiffs will fairly, adequately, and vigorously represent the interests of the Class
2 in prosecuting their claims against Qualcomm. Plaintiffs are represented by counsel who are
3 competent and experienced in the prosecution of antitrust, intellectual property, and class action
4 litigation.

5 230. The questions of law and fact common to members of the Class predominate over
6 any questions affecting only individual members, including any individual legal and factual issues
7 relating to liability and damages.

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

19 **FIRST CLAIM FOR RELIEF**

20 **Violations of the Cartwright Act**
21 **(Cal. Bus. & Prof. Code § 16700, et seq.)**

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

24 233. Qualcomm violated the Cartwright Act, Cal. Bus. & Prof. Code § 16720, by
25 engaging in systematic and continuous conduct with the purpose of (a) creating and carrying out
26 unreasonable restrictions in trade and commerce; (b) increasing the price of modem chips, which
27 are a commodity; (c) limiting or reducing the production of modem chips; (d) preventing
28 competition in manufacturing, making, sale, and purchase of modem chips; (e) fixing at a standard
or figure the price of modem chips intended for sale, use, or consumption in California; (f) making,

1 entering into, executing, and carrying out contracts and agreements that keep the price of modem
2 chips at a fixed or graduated figure; (g) making, entering into, executing, and carrying out contracts
3 and agreements that establish or settle the price of modem chips between Qualcomm and others, so
4 as directly or indirectly to preclude a free and unrestricted competition in the manufacture and sale
5 of modem chips; (h) making, entering into, executing, and carrying out contracts and agreements
6 that pool, combine, or directly or indirectly unite Qualcomm's and others' interests connected with
7 the sale of modem chips and that thereby affect the price of modem chips, and (i) tying the sale of
8 its CDMA and Premium LTE chips to the taking of a full license on Qualcomm's entire patent
9 portfolio—regardless of how many Qualcomm patents were practiced by the licensee's devices.

10 234. Qualcomm also violated the Cartwright Act, Cal. Bus. & Prof. Code § 16727, by
11 (a) making sales and contracts for the sale of Qualcomm modem chips for use in California on the
12 condition, agreement, or understanding that the purchaser shall not use modem chips of one or more
13 Qualcomm competitors, and thereby substantially lessening competition or tending to create a
14 monopoly in the modem chip market in all sections of California; (b) making sales and contracts
15 for the sale of Qualcomm modem chips for use in California for a fixed price, or with a discount or
16 rebate applied to such price, on the condition, agreement, or understanding that the purchaser shall
17 not use modem chips from one or more Qualcomm competitors, and thereby substantially lessening
18 competition or tending to create a monopoly in the modem chip market in all sections of California;
19 and (c) tying the sale of its CDMA and Premium LTE chips to the taking of a full license on
20 Qualcomm's *entire* patent portfolio—regardless of how many Qualcomm patents were practiced
21 by the licensee's devices.

22 235. Qualcomm achieved these unlawful purposes by the regular, intentional, and
23 knowing use of unlawful threats, intimidation, policies (including its NLNC policy), and other
24 unlawful exercises of its dominant position in the modem chip market to coerce its purchasers and
25 licensees (and, in the case of post-exhaustion “licensing” and “royalty” payments, their downstream
26 customers) to form unlawful combinations and conspiracies with Qualcomm in connection with:
27 (a) the licensing of Qualcomm's intellectual property, including by coercing Qualcomm purchasers
28 and licensees to agree and/or otherwise adhere involuntarily to non-FRAND, supracompetitive, and

1 otherwise unlawful licensing rates that are much greater than Qualcomm’s contribution to the
2 cellular standard implemented; (b) royalties paid to or demanded by Qualcomm for the actual or
3 purported use or practice of Qualcomm’s intellectual property, including by coercing Qualcomm
4 purchasers and licensees to agree and/or otherwise adhere involuntarily to non-FRAND,
5 anticompetitive, and otherwise unlawful royalty rates based on the entire price of finished cellular
6 devices; and (c) the supply and sale of Qualcomm’s modem chips, including by coercing
7 Qualcomm’s purchasers and licensees to purchase involuntarily their modem chips from
8 Qualcomm, thereby depriving them of a free and fair opportunity to purchase some or all of those
9 same chips from Qualcomm’s competitors (or potential competitors).

10 236. Qualcomm’s unlawful tactics included but were not limited to: (a) threatening to
11 withhold chip supply from OEMs as a means of coercing OEMs to adhere to Qualcomm’s
12 unreasonable and anticompetitive licensing terms; (b) providing OEMs “rebates,” “discounts,”
13 incentives, and other consideration as a means of coercing OEMs to adhere to Qualcomm’s
14 unreasonable and anticompetitive licensing terms and to continue sourcing their chips from
15 Qualcomm rather than one or more Qualcomm competitors; (c) refusing to sell modem chips unless
16 the purchaser and their downstream customers, including cellular device designers and sellers,
17 agree to pay Qualcomm supracompetitive “licensing” and “royalty” payments to which Qualcomm
18 is not legally entitled because they violate the fundamental principle of patent exhaustion; (d)
19 coercing Apple and other market participants into *de facto* exclusive dealing arrangements and
20 unlawful tying arrangements; (e) refusing to license its SEP patents to competitors, in violation of
21 its FRAND obligations and duty to deal; and (f) otherwise violating its FRAND and other
22 commitments to SSOs and other industry participants.

23 237. Qualcomm’s use of these unlawful tactics, individually and collectively, resulted in
24 the formation of unlawful combinations and conspiracies within the meaning of the Cartwright Act,
25 and the making of unlawful sales and contracts within the meaning of the Cartwright Act.

26 238. Qualcomm’s purchasers and licensees (and, in the case of post-exhaustion
27 “licensing” and “royalty” payments, their downstream customers) involuntarily formed these
28 unlawful combinations and conspiracies with Qualcomm, and involuntarily became parties to these

1 unlawful sales and contracts with Qualcomm, even though doing so is to their net detriment and
2 only results in net benefits to Qualcomm, because doing so was necessary to avoid the significant
3 detrimental impact to their businesses that would occur if Qualcomm were to follow through on its
4 unlawful threats, intimidation, policies (including its NLNC policy), and other unlawful exercises
5 of its dominant position in the modem chip market. For example, OEMs would have no realistic or
6 viable alternative source of modem chip supply and would suffer significant disruptions in their
7 product delivery schedules, if Qualcomm were to follow through on its unlawful threats to
8 substantially disrupt or entirely halt the supply of Qualcomm chips to the OEM if it does not agree
9 or otherwise adhere to Qualcomm's unlawful demands.

10 239. In the absence of Qualcomm's unlawful threats, intimidation, policies (including its
11 NLNC policy), and other unlawful exercises of its dominant position in the modem chip market,
12 Qualcomm's purchasers, licensees, and their downstream customers would not have formed these
13 unlawful combinations and conspiracies with Qualcomm, and they would not have become parties
14 to these unlawful sales and contracts with Qualcomm.

15 240. The intended purpose and effect of Qualcomm's unlawful conduct was and is to
16 exclude Qualcomm's competitors (and potential competitors) from the modem chip market, and to
17 reinforce and grow Qualcomm's dominance in the modem chip market and its ability to extract
18 anticompetitive and supracompetitive revenues and profits from purchasers, licensees, and their
19 downstream customers.

20 241. Qualcomm's unlawful conduct caused and maintained artificially inflated,
21 supracompetitive prices on all CDMA and Premium LTE chips and the cellular devices
22 incorporating such chips. As a direct result, Plaintiffs and the Class members were overcharged
23 hundreds of millions or billions of dollars during the Class Period when they purchased cellular
24 devices incorporating CDMA and Premium LTE chips.

25 242. Qualcomm and Plaintiffs and other Class members are all "persons" within the
26 meaning of the Cartwright Act.

27 243. Qualcomm's violations of the Cartwright Act are continuing and will continue
28 unless enjoined by the Court.

1 244. On behalf of themselves and all Class members, Plaintiffs seek from Qualcomm all
 2 relief available under the Cartwright Act and other applicable California law, including but not
 3 limited to damages, treble damages, interest on actual damages, an award of attorneys' fees together
 4 with their costs of suit, and an injunction against Qualcomm preventing and restraining its unlawful
 5 conduct alleged herein.

6 245. Plaintiffs and Class members will be irreparably harmed if such injunctive relief is
 7 not granted.

8 **SECOND CLAIM FOR RELIEF**
 9 **Violations of the Unfair Competition Law**
 10 **(Cal. Bus. & Prof. Code § 17200, et seq.)**

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

13 247. Qualcomm's conduct alleged herein violated all three prongs of California's Unfair
 14 Competition Law ("UCL"), which broadly prohibits Qualcomm from engaging in "any unlawful,
 15 unfair or fraudulent business act or practice." Cal. Bus. & Prof. Code § 17200.

16 248. Qualcomm's conduct violates the "unlawful" prong of the UCL because it violates
 17 the Cartwright Act.

18 249. Qualcomm's conduct violates the "unfair" prong of the UCL because it was
 19 immoral, unethical, oppressive, unscrupulous, against public policy, and/or violated fundamental
 20 rules of honesty and fair dealing, including but not limited to its conduct of forcing Plaintiffs, Class
 21 members, and other downstream customers and consumers to pay for the artificially inflated,
 22 supracompetitive modem chip prices, licensing fees, and royalty payments that Qualcomm unfairly
 23 extracted from its purchasers, licensees, and other industry participants, in violation of
 24 (a) Qualcomm's voluntary FRAND commitments, (b) Qualcomm's duty to deal, (c) the public
 25 policy of the United States and the State of California supporting the establishing of common
 26 telecommunication technology standards by the SSOs and SEP holders honoring their FRAND
 27 obligations, or (d) the policy and spirit of the Cartwright Act and other California antitrust law and
 28 principles.

1 250. Qualcomm’s conduct further violates the “unfair” prong of the UCL because it
2 (a) threatens an incipient and/or imminent violation of the Cartwright Act, (b) has effects that are
3 the same as or similar to a violation of the Cartwright Act, and (c) significantly threatens and harms
4 competition in the relevant modem chip and cellular device markets.

5 251. Qualcomm’s conduct further violates the “unfair” prong of the UCL because it was
6 immoral, unethical, oppressive, unscrupulous, against public policy, and/or violated fundamental
7 rules of honesty and fair dealing, including but not limited to its conduct of (a) coercing its
8 purchasers and licensees to agree and/or otherwise adhere involuntarily to non-FRAND,
9 supracompetitive, and otherwise unfair licensing rates that are much greater than Qualcomm’s
10 contribution to the cellular standard implemented; (b) coercing its purchasers and licensees to agree
11 and/or otherwise adhere involuntarily to non-FRAND, anticompetitive, and otherwise unfair
12 royalty rates based on the entire price of finished cellular devices; (c) coercing its purchasers and
13 licensees to agree and/or otherwise adhere involuntarily to paying license fees and royalties for
14 patents that are exhausted or otherwise unenforceable under any applicable law and policy,
15 including but not limited to U.S. patent law and policy and Cal. Civ. Code §§ 1671(b), 1598, and
16 1599; (d) coercing its purchasers and licensees to purchase involuntarily their modem chips from
17 Qualcomm, thereby depriving them of a free and fair opportunity to purchase some or all of those
18 same chips from Qualcomm’s competitors (or potential competitors); (e) making representations
19 and commitments to adhere to FRAND rules in order to obtain SEPs, and then violating,
20 repudiating, and otherwise acting in a manner inconsistent with those representations and
21 commitments once it had obtained SEPs; (f) coercing its purchasers to source chips from
22 Qualcomm and not from Qualcomm’s competitors by providing its purchasers kickbacks
23 disingenuously characterized as “discounts,” “rebates,” “incentives,” “reduced royalties,” or some
24 other label; (g) providing its purchasers and licensees kickbacks (disingenuously characterized as
25 “discounts,” “rebates,” “incentives,” “reduced royalties,” or some other label) or other
26 consideration that was contingent on those purchasers not cooperating with government agencies
27 and/or contingent on those purchasers not challenging Qualcomm’s patents; and (h) otherwise using
28

1 unfair threats, intimidation, policies (including its NLNC policy), and exercises of its dominant
2 position in modem chip market.

3 252. The UCL “makes clear that a practice may be deemed unfair even if not specifically
4 proscribed by some other law.” *Cel-Tech Commcn’s, Inc. v. L.A. Cellular Telephone Co.*, 20 Cal.
5 4th 163, 180 (1999). Even where conduct is not prohibited by state antitrust law, the conduct can
6 give rise to an independent cause of action under the UCL’s unfair prong. *See id.* at 180-81 (citing
7 *Motors, Inc. v. Times Mirror Co.*, 102 Cal. App. 3d 735, 741 (1980)). Each UCL case must be
8 analyzed based on its particular facts and circumstances: “no inflexible rule can be laid down as to
9 what conduct will constitute unfair competition. Each case is, in a measure, a law unto itself.” *Pohl*
10 *v. Anderson*, 13 Cal. App. 2d 241, 242 (1936).

11 253. For example, under the unfair prong of the UCL in consumer cases, courts apply a
12 “balancing” test to determine whether a business practice or act is unfair by “examination of the
13 impact of the practice or act on its victim balanced against the reasons, justifications, and motives
14 of the alleged wrongdoer. In brief, the court must weigh the utility of the defendant’s conduct
15 against the gravity of the harm of the alleged victim.” *Progressive W. Ins. Co. v. Superior Court*,
16 135 Cal. App. 263, 285, 286 (2005) (internal quotations marks omitted). Here, where consumers
17 were harmed with no countervailing benefit or utility to consumers or competition, Qualcomm’s
18 conduct is clearly unfair under the UCL.

19 254. Qualcomm’s conduct violates the “fraudulent” prong of the UCL because
20 Qualcomm made representations and commitments to SSOs and their members that it would
21 voluntarily assume and comply with FRAND rules and principles if the SSOs adopted its patented
22 technologies into the relevant telecommunication standards, knowing that the SSOs and their
23 members would rely on Qualcomm’s representations and commitments in deciding whether to
24 incorporate Qualcomm’s patented technologies into the relevant telecommunication standards, and
25 that the SSOs would be substantially more likely to do so if Qualcomm made those representations
26 and commitments. Qualcomm made those representations and commitments with the intent to
27 deceptively induce the SSOs and their members to incorporate Qualcomm’s patented technologies
28 into the relevant telecommunication standards, which the SSOs did so in reliance on Qualcomm’s

1 representations and commitments, thereby granting Qualcomm lucrative monopolies. Thereafter,
2 however, Qualcomm consistently violated, repudiated, and otherwise acted in a manner
3 inconsistent with its FRAND representations and commitments and instead used its SSO-granted
4 monopolies, which it would not have obtained if it had not made its false and deceptive FRAND
5 representations and commitments, to further entrench its dominance over the global modem chip
6 market and to extract abusive and supracompetitive chip prices and licensing and royalty payments
7 from industry participants, all of which were passed on to and ultimately paid by Plaintiffs and
8 Class members.

9 255. All of Qualcomm's unlawful, unfair, and fraudulent conduct and practices,
10 individually and collectively, significantly threaten and harm competition in the market for mobile
11 wireless handsets, tablets, and other CDMA- and LTE-compliant products, in California and
12 elsewhere, thereby causing injury to consumers. Such injury includes the entirely foreseeable
13 passing on to consumers of improper licensing fees and royalties obtained by Qualcomm and the
14 other costs of Qualcomm's said conduct and practices.

15 256. All of Qualcomm's unlawful, unfair, and fraudulent conduct and practices,
16 individually and collectively, are a direct and proximate cause of injury to Plaintiffs and Class
17 members, including Plaintiffs and Class members having to pay more for cellular devices than they
18 would have paid for those devices in the absence of said conduct and practices.

19 257. Plaintiffs bring this claim on behalf of themselves, other Class members, and the
20 public as private attorneys general under Cal. Bus. & Prof. Code § 17204.

21 258. Qualcomm's violations of the UCL are continuing and will continue unless enjoined
22 by the Court.

23 259. On behalf of themselves, all Class members, and the public, Plaintiffs seek from
24 Qualcomm all relief available under the UCL and other applicable California law, including but
25 not limited to restitution (inclusive of restitutionary disgorgement of all Qualcomm's earnings,
26 profits, compensation, benefits, and other ill-gotten gains obtained by Qualcomm directly or
27 indirectly from consumers because of its unlawful, unfair, and fraudulent conduct and/or
28 nonrestitutionary disgorgement of all Qualcomm's earnings, profits, compensation, benefits, and

1 other ill-gotten gains obtained by Qualcomm because of its unlawful, unfair, and fraudulent
2 conduct); Plaintiffs' reasonable attorneys' fees and costs of suit; and injunctive relief preventing
3 and restraining Qualcomm's unlawful, unfair, and fraudulent conduct alleged herein.

4 260. Plaintiffs further seek injunctive relief barring Qualcomm from continuing to
5 engage in the unlawful, unfair, and fraudulent conduct alleged herein.

6 261. Plaintiffs, Class members, and the public will be irreparably harmed if such
7 injunctive relief is not granted.

8 **VI. JURY DEMAND**

9 Pursuant to Federal Rule of Civil Procedure 38(b), Plaintiffs demand a trial by jury on all
10 issues so triable.

11 **VII. PRAYER FOR RELIEF**

12 WHEREFORE, Plaintiffs, on behalf of themselves and a class of all others similarly
13 situated, request that the Court enter an order or judgment against Defendant including the
14 following:

- 15 a. That Qualcomm's conduct be adjudged and decreed to violate the laws alleged in
16 the Complaint;
- 17 b. An award of all available damages under California law, including but not limited
18 to treble damages under the Cartwright Act;
- 19 c. An award of statutory interest on actual damages under the Cartwright Act;
- 20 d. Injunctive relief enjoining and restraining Qualcomm from in any manner
21 continuing, maintaining, or renewing the anticompetitive or otherwise unlawful
22 conduct alleged herein, or from adopting or following any practice, plan, program,
23 or device with a similar purpose or effect;
- 24 e. Restitution and disgorgement under Cal. Bus. & Prof. Code § 17203;
- 25 f. An award of pre- and post-judgment interest;
- 26 g. An award of attorneys' fees and costs of suit; and
- 27 h. All other appropriate relief at law or in equity, including injunctive relief.
- 28

1 Dated: June 10, 2022

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