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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

FEDERAL TRADE COMMISSION,

Plaintiff,

vs.

QUALCOMM INCORPORATED, a Delaware corporation,

Defendant.

Case No. 5:17-cv-00220-LHK

BRIEF OF *AMICUS CURIAE* INTEL CORPORATION IN SUPPORT OF PLAINTIFF'S OPPOSITION TO DEFENDANT'S MOTION TO DISMISS

Date: June 15, 2017
Time: 1:30 p.m.
Courtroom: 8, 4th Floor
Judge: Hon. Lucy H. Koh

TABLE OF CONTENTS

Page

INTEREST OF AMICUS CURIAE 1

BACKGROUND 2

A. Recent Developments in the Cellular Landscape and the Attendant Reduction in Qualcomm's Importance 2

B. Qualcomm's Anticompetitive Practices 3

C. The Widespread Harm That Qualcomm Inflicts 4

1. Mobile-Handset Manufacturers (or OEMs) 4

2. Qualcomm's Competitors 5

ARGUMENT 6

I. QUALCOMM'S NO-LICENSE-NO-CHIPS POLICY UNLAWFULLY MAINTAINS QUALCOMM'S CHIPSET MONOPOLY 6

A. The FTC's Complaint States a Claim Under FTC Act Section 5 Based on Qualcomm's No-License-No-Chips Policy 7

B. Qualcomm's Defense of Its No-License-No-Chips Scheme Is Unpersuasive 13

II. THE FTC HAS STATED A VALID CLAIM BASED ON QUALCOMM'S BREACH OF ITS FRAND COMMITMENTS TO LICENSE ITS SEPS TO ITS COMPETITORS 17

III. THE FTC HAS PROPERLY ALLEGED A CLAIM BASED ON QUALCOMM'S EXCLUSIVE SUPPLY ARRANGEMENTS WITH APPLE 19

TABLE OF AUTHORITIES

Page(s)

CASES

Apple, Inc. v. Motorola, Inc., 869 F. Supp. 2d 901 (N.D. Ill. 2012), *aff'd in part, rev'd in part on another ground*, 757 F.3d 1286 (Fed. Cir. 2014) 18

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522 F.3d 456 (D.C. Cir. 2008) 15

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No. C-05-01673 RMW, 2008 WL 4809441 (N.D. Cal. Oct. 28, 2008) 20

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399 F.3d 181 (3d Cir. 2005) 15

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540 U.S. 398 (2004) 16

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627 F.3d 85 (3d Cir. 2010) 8

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15 U.S.C. § 1 ..... 7, 8, 11, 20

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15 U.S.C. § 53(b) 7

RULE

Federal Rule of Civil Procedure 9(b) 19

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INTEREST OF AMICUS CURIAE

Intel Corporation is one of the world's leading technology innovators. Intel's micro-processing inventions have powered the digital revolution that has transformed society. Intel's chipsets are found in a large percentage of the world's computers, from everyday desktops and laptops to the servers that form the backbone of the modern digital economy. Cutting-edge innovation is Intel's lifeblood.

Over the past decade, Intel has brought its innovative prowess to bear on the micro-processing technology that makes cellular telephone communications and smartphone internet connectivity possible—a market that Qualcomm has dominated for years. Although Qualcomm has driven nearly all of its competitors out of the premium LTE chipset market, Intel has not thrown in the towel. To the contrary, Intel has invested billions in developing next-generation advanced baseband chipsets and technologies that will improve the performance and functionality of modern smartphones and cellular communications.

Intel is ready, willing, and able to challenge Qualcomm's market dominance on the merits. But for years Qualcomm has maintained an interlocking web of abusive patent and commercial practices that subverts competition on the merits. These practices have coerced mobile-phone manufacturers (also known as "original equipment manufacturers" or "OEMs") into purchasing the chipsets they need from Qualcomm and Qualcomm alone. The FTC's detailed complaint documents the Qualcomm practices that have created that coercive business climate and stymied competition. Qualcomm's behavior has inflicted and continues to inflict precisely the harms that the antitrust laws seek to protect against: harm to the competitive process, to consumer welfare, and to innovation and progress.

The FTC's allegations of anticompetitive conduct reflect the reality that Intel has experienced in the marketplace. Further proceedings in this case will shed much-needed light on Qualcomm's abusive practices and the harms those practices inflict on the competitive process and on consumers. Intel respectfully urges this Court to allow the FTC's complaint to proceed.

BACKGROUND

A. Recent Developments in the Cellular Landscape and the Attendant Reduction in Qualcomm's Importance

Qualcomm's defense of its monopoly in the advanced baseband chipset market rests on a narrative that is woefully out-of-date. Qualcomm might once have had a legitimate claim to having earned its dominance through innovation and hard work. But for many years it has maintained its monopoly through practices that suppress competition and harm consumers.

Cellular communications are transmitted over vast networks, each controlled by a different provider, such as Verizon, AT&T, or Sprint. For a cellular network to function—that is, for communications to be transmitted successfully from one mobile handset to another—all of the players involved must adhere to a common set of standards. This Court is well aware of the role standards setting organizations ("SSOs") play in the cellular communications industry, as well as the benefits and dangers that result from the adoption of industry-wide standards and the granting of standard-essential patents ("SEPs"). *See Apple Inc. v. Samsung Elecs. Co.*, No. 11-CV-01846-LHK, 2011 WL 4948567, at *1–*2 (N.D. Cal. Oct. 18, 2011) (explaining patent "lock in" and "hold up"); *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1030–31 (9th Cir. 2015) (same). Likewise, this Court is aware of the critical role that commitments by patent holders to license SEPs on fair, reasonable, and non-discriminatory ("FRAND") terms plays in mitigating such dangers. Compl. ¶¶ 48–51.

Qualcomm invested heavily in standard setting for the 2G-CDMA generation of cellular standards. Compl. ¶ 54. As a result, Qualcomm holds upwards of 90 percent of 2G-CDMA SEPs. *Id.* Those patents established Qualcomm's initial monopoly in the baseband chipset market. But 2G-CDMA—adopted in 1995 (Compl. ¶ 19.b)— has been surpassed by two subsequent generations of standards: 3G and 4G (LTE). Compl. ¶¶ 19.c, 19.d. And because patents generally do not last more than 20 years, most (if not all) SEPs associated with 2G-CDMA have expired.

Qualcomm's role in developing the 3G and 4G standards was nothing like the role the company played in developing the 2G-CDMA standards. Compl. ¶¶ 54–56. Qualcomm was just one of *hundreds* of companies that were involved in the standards-development process for LTE.

In keeping with that diminished role, Qualcomm's share of 4G LTE SEPs is roughly equal to the SEP shares of many other industry participants. *See* Compl. ¶ 56 (noting that Qualcomm has a 13 percent share of "highly novel" LTE SEPs, whereas Nokia has 19 percent and Ericsson and Samsung each have 12 percent).

The smartphone has also evolved by leaps and bounds. In the 2G era, the baseband chipset was far and away the most important component in a handset, because the critical feature of any phone was its cellular functionality. Now, however, a cell phone is a sophisticated computer, and the chipset is just one of many components that contribute to the phone's value. Customers still demand that their chipsets facilitate seamless cellular communication; but they also may insist on Wi-Fi, advanced operating systems, high-resolution displays, expansive storage, and powerful cameras. This evolution, too, should have weakened Qualcomm's grip over the industry.

B. Qualcomm's Anticompetitive Practices

Instead of waning, however, Qualcomm's dominance in the baseband chipset market has only continued to expand. For example, although Ericsson has roughly the same share of "highly novel" LTE SEPs as Qualcomm, Qualcomm makes more than four times the amount that Ericsson makes in cellular royalties. Alexander Galetovic, Stephen H. Haber & Lew Zaretzki, *A New Dataset on Mobile Phone Patent License Royalties* (Sept. 25, 2016), Tab 1.7 – Revenues by Licensor, http://tinyurl.com/ldbqx3l.

This dominance arises not from Qualcomm's inherent superiority, but rather from its anticompetitive practices. As the FTC alleged, these practices take a number of forms:

- An unprecedented "no-license-no-chips" policy, whereby Qualcomm refuses to sell OEMs any chipsets unless those manufacturers also purchase separate patent licenses that require them to pay exorbitant royalties for every handset they sell, regardless of whether the handset contains a Qualcomm chipset;
- A refusal to license SEPs to competitors, in violation of its FRAND commitments;
- A long-running exclusive supply arrangement with Apple that resulted in below-cost pricing for Qualcomm's chipsets and substantial foreclosure of the premium baseband chipset market.

These anticompetitive stratagems reinforce each other: By refusing to license its competitors and by coercing its customers into exclusivity deals, Qualcomm fences other chipset manufacturers out of the market. The resulting lack of alternative supply options, in turn, makes Qualcomm's customers increasingly more dependent on a consistent supply stream from Qualcomm. And this dependence means that a threatened disruption in chipset supply from Qualcomm has a powerful coercive effect. Rather than risk losing access to Qualcomm chipsets, Qualcomm's customers quickly acquiesce to the company's desired terms and policies. These understandable capitulations, in turn, further entrench Qualcomm's monopoly. Because Qualcomm can expect acquiescence, it has the latitude to insist upon license terms that impose huge unjustified barriers in the path of competitors seeking to enter the market.

C. The Widespread Harm That Qualcomm Inflicts

Not surprisingly, the negative ramifications of Qualcomm's unlawful conduct extend to OEMs, other baseband chipset manufacturers, and consumers.

1. Mobile-Handset Manufacturers (or OEMs)

Qualcomm coerces OEMs into submission by threatening to disrupt their chipset supply. Qualcomm's practice of putting the screws to its customers upsets the conventional bargaining process. To give just one example: Qualcomm originally signed a 2G-CDMA licensing agreement with a customer in 1993. In the early 2000s, the customer attempted to renegotiate the licensing agreement to reflect the decrease in the proportion of CDMA SEPs that Qualcomm owned. When the customer suggested that it would stop paying certain royalties and proposed that the parties should settle their contractual dispute through arbitration, Qualcomm threatened to terminate the customer's chipset supply. Because a termination would have crippled its handset business, the customer quickly folded. [1]

[1] This example is drawn from the findings of fact in a decision from the Korea Fair Trade Commission ("KFTC"). *See In the Alleged Abuse of Market Dominance of Qualcomm Incorporated*, Korea Fair Trade Comm'n Decision No. 2017-0-25, Jan. 20, 2017, ¶¶ 131–36 (S. Kor.). Though Intel is not suggesting that the KFTC's decision would constitute admissible evidence or that the Court should rely on it in adjudicating this motion to dismiss, decisions from foreign jurisdictions cannot "be ignored." *Fenerjian v. Nongshim Co.*, 72 F. Supp. 3d 1058, 1071 (N.D. Cal. 2014). The KFTC's factual findings are a window into the evidence that would likely be elicited in discovery should this matter proceed.

Qualcomm's ability to coerce customers in this manner has deleterious consequences. First, Qualcomm uses its advantage to strong-arm its customers into paying inflated royalties. Because Qualcomm refuses to license the competitors who could provide an alternative supply stream, Qualcomm's customers have no choice but to pay whatever Qualcomm demands.

Second, Qualcomm forces its customers to agree to contract terms that reflect an outdated conception of the market: handsets have evolved into high-tech computers, and Qualcomm's insistence on a royalty based on the overall price of a handset exaggerates the baseband chipset's proportional significance.

Third, Qualcomm exploits its monopoly power to inhibit its customers' access to arbitration or litigation and thus to insulate its licensing agreements and its SEPs from judicial scrutiny. The moment a customer contemplates suit, Qualcomm brandishes its most powerful weapon: a disruption in chipset supply. For years, the mere threat of a supply disruption has been enough to dissuade Qualcomm's customers from filing suit and testing Qualcomm's royalty demands, and Qualcomm's unlawful conduct has thus proceeded largely unchecked.

Fortunately, despite Qualcomm's best efforts to insulate itself from legal challenges, the company's anticompetitive practices have slowly begun to come to light, thanks to investigations from a number of competition agencies over the last decade. The Korea Fair Trade Commission has issued two decisions against Qualcomm and has imposed substantial fines. The Japan Fair Trade Commission, China's National Development and Reform Commission, and the European Commission have all condemned Qualcomm's practices, and the Taiwan Fair Trade Commission is currently conducting its own investigation as well. This collective scrutiny has finally brought Qualcomm's anticompetitive restraints and their deleterious effects out into the open. If permitted to proceed, this suit promises to be another critical step in that process.

2. Qualcomm's Competitors

The FTC's complaint sets forth the harms that Qualcomm's anticompetitive practices have inflicted on competitors. By raising the cost of using competitors' chipsets, Qualcomm has "diminished OEMs' demand for those processors, reduced competitors' sales and margins, and diminished competitors' ability and incentive to invest and innovate." Compl. ¶ 138. As a result,

"[s]everal former competitors of Qualcomm have sold off or shuttered their baseband processor businesses, unable to achieve the sales volumes and margins needed to sustain a viable business." Compl. ¶ 139.

Intel is Qualcomm's only remaining rival in the premium LTE chipset market for sales to third party OEM handset makers. But it, too, has not been spared. As just one example, for many years Qualcomm effectively blocked Apple from being supplied by Intel. If this case is permitted to proceed, the evidence will show that but for this exclusionary conduct, Apple would have agreed to use Intel's chipsets in earlier iterations of the iPhone. Because Intel's chipsets were instead excluded, Intel (i) lost sales and margin, (ii) missed out on critical opportunities to collaborate with Apple and cellular providers and thus to obtain development feedback, and (iii) lacked the marketplace credibility that a supply contract with Apple would have bestowed. Compl. ¶¶ 8, 121–30. These consequences, moreover, heighten Intel's disadvantage every time it attempts to compete with Qualcomm for future sales to OEMs.

For too long, Qualcomm has blocked OEMs from assessing competing chipsets on their merits. OEMs have been forced to select chipsets based not on quality, price, or the desire for a diverse inventory, but rather based on a crippling fear of supply disruption. Qualcomm's web of anticompetitive practices distorts prices in this market, which imposes a financial burden on OEMs, rival chipset manufacturers, and ordinary consumers alike. These kinds of systemic disadvantages are precisely what impelled Intel to file this brief. Unless Qualcomm's unlawful conduct is stopped, Intel will remain at risk, and competition and innovation will remain stifled. *See* Compl. ¶ 140. The judicial scrutiny the FTC seeks is necessary to avoid these results and restore fair competition to an industry that is vital to the U.S. and global economies.

ARGUMENT

I. QUALCOMM'S NO-LICENSE-NO-CHIPS POLICY UNLAWFULLY MAINTAINS QUALCOMM'S CHIPSET MONOPOLY

The FTC has correctly identified the heart of Qualcomm's anticompetitive scheme as its no-license-no-chips policy, under which OEMs purchasing Qualcomm chipsets must agree also to license Qualcomm's SEP portfolio for their handsets that do not use Qualcomm chipsets. The

FTC's complaint makes a compelling case that the no-license-no-chips policy harms competition in the markets for baseband chipsets, even to the point of excluding Qualcomm's competitors, by raising the cost of—and thus discouraging OEMs from—using chipsets from any supplier but Qualcomm. Qualcomm's effort to recast the FTC's complaint as a mere quarrel about the price it asks for a license to its SEPs is unpersuasive. At the very least, Qualcomm's assertion that this case is merely about price, and not competition, is no reason to dismiss out of hand the FTC's more plausible—and more damning—allegations to the contrary.

A. The FTC's Complaint States a Claim Under FTC Act Section 5 Based on Qualcomm's No-License-No-Chips Policy

The FTC can state a claim under Section 5 of the FTC Act, 15 U.S.C. § 53(b), by alleging unilateral conduct that constitutes monopolization under Section 2 of the Sherman Act, 15 U.S.C. § 2, or an agreement that violates Section 1 of the Sherman Act, 15 U.S.C. § 1. *Cf. Cal. Dental Ass'n v. FTC*, 526 U.S. 756, 762 n.3 (1999). "The offense of monopolization has two elements: '(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.'" *United States v. Microsoft Corp.*, 253 F.3d 34, 50 (D.C. Cir. 2001) (en banc) (quoting *United States v. Grinnell Corp.*, 384 U.S. 563, 570–71 (1966)). To state a claim under Section 1, a plaintiff must plead "(1) a contract, combination or conspiracy among two or more persons or distinct business entities; (2) by which the persons or entities intended to harm or restrain trade or commerce . . . ; (3) which actually injures competition." *Kendall v. Visa U.S.A., Inc.*, 518 F.3d 1042, 1047 (9th Cir. 2008).

Qualcomm does not dispute that the Complaint adequately alleges that it has monopoly power in the relevant chipset markets. Compl. ¶¶ 2, 31–47, 131–134. And the FTC alleges that Qualcomm and OEMs have entered agreements that restrain trade by conditioning (a) Qualcomm's supply of chipsets for the OEM's many handsets that *do* use Qualcomm chipsets on (b) the OEM's payment of royalties for Qualcomm's SEPs on sales of handsets that *do not* use Qualcomm chipsets. Compl. ¶¶ 3.a, 86. Thus, the question is whether (from the Section 2 perspective) the no-license-no-chips policy maintains Qualcomm's chipset monopoly, or whether

(from the Section 1 perspective) the agreements linking licenses to chipsets injured competition by unreasonably restraining trade. The standards for answering those questions are, as applied to this case, essentially the same: Under Section 2, "to be condemned as exclusionary, a monopolist's act must have an 'anticompetitive effect.' That is, it must harm the competitive process and thereby harm consumers." *Microsoft*, 253 F.3d at 58. And under Section 1, "[a]t the pleading stage, a plaintiff may satisfy the unreasonable-restraint element by alleging that the conspiracy produced anticompetitive effects," which "include increased prices, reduced output, and reduced quality." *W. Pa. Allegheny Health Sys., Inc. v. UPMC*, 627 F.3d 85, 100 (3d Cir. 2010).

The Complaint satisfies both standards. Qualcomm's no-license-no-chips policy elevates the price at which the company licenses its SEPs, relative to the price at which it would license those SEPs if it were to negotiate licenses without a threat to cutoff chipset supply. The FTC alleges this royalty elevation throughout its complaint. See, *e.g.*, Compl. ¶¶ 3.a, 4, 6, 86. And it makes perfect sense: An OEM negotiating a patent license under the threat of a supply cutoff is put to a Hobson's choice: It can accept Qualcomm's license terms, or it can leave the negotiation with no license—and no chips. What the OEM cannot do is resort to a neutral arbiter on questions that would bear on the appropriate royalty: What Qualcomm patents do the OEM's handsets actually infringe? Which of Qualcomm's patents are valid? Are Qualcomm's royalty demands justified by the technical contribution of its patents?

The history of SEP adjudication shows how important those determinations are (and thus how important a check they are in negotiations with a SEP holder): The overwhelming majority of SEPs that have been subject to adjudication have been found either invalid or not infringed. *See* RPX Corp., *Standard Essential Patents: How Do They Fare?* (2014), https://tinyurl.com/mss83lh. And where damages have been awarded for infringement of FRAND-encumbered patents, those royalties have been a tiny fraction of the royalty the patent holder sought. *See* Compl. ¶ 71. But no OEM can afford to initiate such a proceeding if the price is years of selling no handset with a Qualcomm chipset in it while waiting on an adjudication. See Compl. ¶¶ 80–81. Disabled from appealing to those normal processes, OEMs must pay royalties that are both unrelated to the merits of Qualcomm's portfolio and higher than what would emerge from a negotiation conducted

free of the threat of losing access to the chipsets on which their businesses depend. Such an obvious effort "to disrupt the proper functioning of the price-setting mechanism of the market," *FTC v. Ind. Fed'n of Dentists*, 476 U.S. 447, 461–62 (1986), immediately calls Qualcomm's no-license-no-chips policy into question.

It is especially plausible that Qualcomm's policy has the effects just described because no other reasonable alternative explanation exists for Qualcomm's decision to hold OEMs' chipset supplies hostage. In effect, instead of using the monopoly power it has over its chipsets to simply obtain a monopoly price for those chipsets, Qualcomm is using some of that power to force OEMs also to take licenses at a price higher than they would negotiate in the absence of a threat to their chipset supply. Qualcomm's demand is unique in this industry (*see* Compl. ¶¶ 64, 69), and Qualcomm's distinctive monopoly power over chipsets is what gives it the means (and, as discussed below, the motive) to coerce OEMs into accepting that arrangement.

Qualcomm claims its no-license-no-chips policy arises from a righteous desire to "not assist [OEMs] in their infringement [of Qualcomm's SEPs] by selling them modem chips." Mot. 8. But that is unpersuasive on its own terms: The Complaint does not assert a freestanding claim that Qualcomm would violate the antitrust laws by merely insisting that handsets using *Qualcomm* chipsets be licensed in some way. The Complaint focuses, instead, on Qualcomm's policy of conditioning its chipset sales on the OEM agreeing that handsets using *another vendor's* chipsets be licensed on the terms Qualcomm dictates. But selling Qualcomm chipsets to an OEM plainly does not "assist" that OEM in producing a handset that uses *another vendor's* chipset—making Qualcomm's policy unnecessary to avoid "assisting" supposed infringement that Qualcomm is no part of. Qualcomm "assists" an OEM's sale of handsets using other vendors' chipsets only in the sense that Qualcomm could devastate an OEM completely by cutting off its supply.[2]

[2] Certainly, Qualcomm can vindicate its patent rights and exploit them to the limit of the law and its FRAND commitments. It has ample means to do so: It can negotiate with OEMs without brandishing its monopoly power in chipsets. It can directly license the makers of those competing chipsets. And if all else fails, it can bring infringement actions, just as other SEP holders in the industry do. Indeed, this result would not only be sound competition policy, but sound patent policy as well. See *FTC v. Actavis, Inc.*, 133 S. Ct. 2223, 2233 (2013) (noting that infringement actions putting validity at issue serve "the patent-related policy of eliminating unwarranted patent

Qualcomm's use of monopoly power to increase royalties market-wide is anticompetitive. Those elevated royalties increase the cost of using Qualcomm's competitors' chipsets, plainly disadvantaging them in trying to sell chipsets to OEMs, and thus reducing their ability and incentive to contest Qualcomm's chipset monopoly. Qualcomm suffers no such effect: Regardless of exactly how Qualcomm's scheme affects its chipset price and the elevated royalty, both income streams flow back to it, giving it a rich return on the research and development that produced both its chipsets and patents, and assuring its incentive to continue investing in its monopoly. And OEMs—anticipating that competing OEMs will be equally disadvantaged by the scheme Qualcomm imposes marketwide—are poorly positioned to resist Qualcomm, especially if it simply charges roughly the same total price for the chipset-and-royalty package as it would have charged if it had negotiated both prices independently.

The FTC has alleged the profound and lasting competitive harms of this scheme. In particular, Qualcomm's no-license-no-chips policy (i) "increases the all-in cost to an OEM of using a competitor's baseband processor, and thus weakens the competitive constraint on Qualcomm's own all-in baseband processor price" (Compl. ¶ 89), "diminishes OEMs' demand for [competitors'] processors and reduces competitors' sales and margins" (Compl. ¶ 90), and has an adverse effect on rivals' ability "to sustain the research and development required to maintain a viable business" (Compl. ¶ 91). Indeed, a competitor like Intel is further hampered because Qualcomm is effectively setting the cost for using Intel's chipsets, yet Intel is not privy to that transaction and therefore can only guess at the precise disadvantage that Qualcomm inflicts upon it. The FTC also alleges that Qualcomm's conduct has "limited competitors' ability to discipline the all-in prices that Qualcomm charges for baseband processors," which "enables Qualcomm to raise the all-in prices of processors without spurring substitution or attracting entry." Compl. ¶ 94. Qualcomm has effectively created a higher hurdle to entry (and a lower trigger for exit) by other chipset vendors, perpetuating its monopoly by discouraging future investment by anyone that might challenge it. *See* Compl. ¶ 139 (alleging other firms' exit from the chipset supply market).

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grants so the public will not 'continually be required to pay tribute to would-be monopolists without need or justification'" (quoting *Lear, Inc. v. Adkins*, 395 U.S. 653, 670 (1969))).

In short, Qualcomm has tilted the playing field in its favor—not by "a superior product, business acumen, or historic accident," *Grinnell*, 384 U.S. at 571, but by abusing monopoly power in the chipset market to elevate costs in the market for SEP licenses.

Qualcomm's scheme resembles—in both design and effect—others that courts and scholars have long recognized are anticompetitive. To begin with, Qualcomm's no-license-no-chips policy can be described as "tying"—that is, a seller's practice of conditioning the sale of one product (the "tying product") on the buyer's purchase of a distinct product (the "tied product"). Here, Qualcomm has conditioned the sale of its chipsets (the tying product) on a license for handsets using non-Qualcomm chipsets (the tied product). Courts have long been skeptical of mandatory ties by sellers with market power in the market for the tying product. Indeed, under narrow conditions, such restraints are even presumed to be anticompetitive and violate Section 1 *per se*. *Jefferson Par. Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 13–17 (1984). The Supreme Court has also noted characteristics of other "invalid tying arrangement[s]," *id.* at 12, that are often condemned under the rule of reason.

Regardless of whether Qualcomm's arrangement belongs in a doctrinal pigeonhole with other tying agreements, its tying of licenses and chipsets can—and does—have significant anticompetitive effects. Of special relevance here, although many tying arrangements are designed to acquire monopoly power in the market for the tied product (*id.* at 14), tying can also—as here—"entrench[] [a monopolist's] initial tying-product monopoly." 9 Philip Areeda & Herbert Hovenkamp, *Antitrust Law* ¶ 1703d1, at 44 (3d ed. 2011). In the D.C. Circuit's *Microsoft* decision, for example, one anticompetitive effect of Microsoft's tying arrangement—bundling of its Internet Explorer browser (the tied product) with its Windows operating system (the tying product)—was "significantly reducing usage of rivals' products and hence protecting its own operating system monopoly." 253 F.3d at 65. Leading antitrust scholars give another example strikingly similar to Qualcomm's scheme: They posit a monopolist seller (say, Qualcomm) of product *M* (Qualcomm's chipsets) that seeks to protect its monopoly in *M* from the threat of buyers instead using competing product *S* (competing chipsets). 9 *Antitrust Law* ¶ 1705f2, at 69–70. The monopolist ties *M* to product *C* (the license to Qualcomm's SEPs), which buyers of *M*

and *S* need, regardless of whether they opt for *M* or *S*. The tying arrangement allows the monopolist to elevate the price of *C* (just as Qualcomm elevates the royalty here) while charging a competitive price for the monopoly product *M*, thus discouraging buyers switching to *S* (that is, discouraging the purchase of competitors' chipsets). *Id.* This maintains the seller's monopoly power in *M* and allows the scheme to continue. *Id.*

Courts have also condemned arrangements that, like Qualcomm's scheme here, raise market costs to the defendant's benefit and its rivals' detriment. For example, the defendant in *Premier Electrical Construction Co. v. National Electrical Contractors Ass'n*, 814 F.2d 358 (7th Cir. 1987), was an Association of electrical contractors doing a large share of the Nation's electrical work. The Association agreed with the Union representing the contractors' employees that the Union's contracts with all contractors—whether or not they were members of the Association—would include a 1% surcharge paid into a Fund for the benefit of the Association. *Id.* at 359. The Union was thus not forbidden from dealing with non-Association contractors (just as most OEMs are not forbidden from dealing with other chipset vendors), but as the price of doing so, the Union and non-Association contractors were obliged to support the Association (just as an OEM dealing with a vendor other than Qualcomm must direct an elevated royalty back to Qualcomm). Judge Easterbrook explained that the arrangement was obviously anticompetitive: "The Association used the Union to increase its rivals' costs of doing business, the better to eliminate a source of competition. The result was higher prices to purchasers of electrical work and higher profits for members of the Association—both because there is more in the Fund, for the Association's use, and because the reduction in competition enabled the members to capture more of the market." *Id.* at 368 (citing, *inter alia*, T. Krattenmaker & S. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price*, 96 Yale L.J. 209 (1986)).

The latter feature—the reduction in competition allowing the already-dominant Qualcomm to maintain its monopoly—is especially salient here. Although the *Premier Electrical* arrangement reflected dominance exerted through a horizontal agreement among members of the Association (see 814 F.2d at 368–70), that feature was unnecessary to its finding of harm to competition. For example, the Ninth Circuit endorsed *Premier Electrical* in a monopolization

case involving no horizontal agreement brought against a dominant hospital, alleging a practice of raising competing hospitals' costs by "funneling indigent and low-paying patients to [those hospitals]." *Forsyth v. Humana, Inc.*, 114 F.3d 1467, 1478 (9th Cir. 1997), *aff'd on other claims*, 525 U.S. 299 (1999), and *overruled on another issue, Lacey v. Maricopa Cty.*, 693 F.3d 896 (9th Cir. 2012).

Finally, the above discussion reveals that Qualcomm's refusal to license competing chipset vendors (Compl. ¶ 112) is an essential bulwark in its scheme. As explained below, that refusal to license is an independent antitrust violation. *See infra*, pp. 17–19. But quite apart from that, Qualcomm's refusal to license confirms the correctness of the FTC's account of the no-license-no-chips policy: That refusal keeps the entire no-license-no-chips strategy from collapsing, for if other chipset vendors could obtain a pass-through license to Qualcomm's SEPs, several related things would happen. Most importantly, because those chipset vendors would be immune to Qualcomm's threat of a supply cutoff, they would negotiate a price for a license from Qualcomm that would actually reflect Qualcomm's FRAND commitment, the relative technical merit of its patents, the extent to which those patents truly are standard essential, and the probability that many of Qualcomm's patents are invalid—in other words, all the factors that Qualcomm renders irrelevant in negotiations with OEMs when it threatens to cut off their supply of chipsets. Moreover, Qualcomm's competitors would know the cost of the patent rights necessary to use their chipsets, allowing them to make intelligent and informed investments that would lead to future competition with Qualcomm. The FTC's allegations thus establish that Qualcomm avoids chipset-level licensing because Qualcomm would lose the ability to impose elevated royalties on transactions involving its competitors.

B. Qualcomm's Defense of Its No-License-No-Chips Scheme Is Unpersuasive

In moving to dismiss, Qualcomm says little about how deploying its power over chipsets through its no-license-no-chips policy might promote competition, arguing instead that its practices merit no scrutiny because they only involve the pricing of a license to Qualcomm's SEPs. None of Qualcomm's arguments is sound.

First, Qualcomm argues that the FTC has not even plausibly pled that Qualcomm's royalty

rates are elevated above the level that would prevail if Qualcomm negotiated royalties without threatening a chipset supply cutoff. Any industry participant that has tried to negotiate with Qualcomm would disagree. As explained above, the obvious effect of Qualcomm's no-license-no-chips policy is to frustrate the ordinary competitive negotiating process; it would be surprising to discover that Qualcomm's scheme did *not* affect OEMs' royalty costs. Qualcomm nonetheless defends its assertion by pointing out the FTC's allegation that Qualcomm has consistently offered licenses bearing royalties of approximately 5% of handsets' net selling price—a rate that Qualcomm suggests has not varied with its market power. Mot. 10. But Qualcomm ignores how its position in the industry has diminished over time. A page of history is worth a volume of economics: While Qualcomm has continued to extract the same share of the same handset price, its SEP portfolio has dramatically declined in importance as standards have evolved, and handsets have evolved from offering little more than cellular functionality to incorporating a vast number of other features. *See supra*, p. 3. In other words, the licensing terms Qualcomm actually obtains may not have changed, but the FTC quite plausibly alleges that what *has* changed are the licensing terms Qualcomm would have obtained but for its no-license-no-chips policy. Thus, in an industry that has evolved far, far beyond the innovations that won Qualcomm its dominance decades ago, the consistency that Qualcomm trumpets *confirms*, rather than refutes, the FTC's allegations.

Second, Qualcomm contends that no disparity exists between the royalties nominally paid on handsets using Qualcomm chipsets and royalties paid on handsets using other vendors' chipsets. Mot. 11–12. To begin with, Qualcomm's claim that "there is no difference in royalty rates" (Mot. 12) is incoherent because there are not two meaningful royalty rates to compare. The royalty payable on handsets with non-Qualcomm chipsets is real; for example, on a $500 phone with an Intel chipset, Qualcomm might collect a $25 royalty. But the stated royalty Qualcomm charges for handsets using Qualcomm chipsets is a mirage: If an OEM pays Qualcomm $40 for a chipset and license, that cost could be described as $15 for the chipset and a $25 royalty (which is superficially nondiscriminatory)—but it could equally well be described as $30 for the chipset and a $10 royalty (which is obviously discriminatory). Moreover, the discrimination exists not in the fact that a royalty is collected, but in the discrepancy between who is benefitted and who is

burdened. *Premier Electrical* illustrates this point: A superficially uniform market-wide cost increase (there, a uniform 1% contribution; here, a nominally nondiscriminatory royalty) is substantively discriminatory when it raises the costs associated with using a rival's product, but not the costs associated with using the defendant's own product. Or, to use the FTC's description of the elevated royalty as a tax, it is obviously better to be the tax collector than the taypayer.

Third, Qualcomm argues that the FTC has not stated a claim because the Complaint fails to allege the "exclusion of competitors." Mot. 11. That is incorrect. The FTC has alleged that other chipset vendors exited the market—nothing could be more exclusionary. Compl. ¶ 139. More broadly, the FTC's other allegations of anticompetitive harm—barriers to entry and disincentives to competitive investment—suffice to show that Qualcomm's scheme is exclusionary, quite apart from any particularized allegations of products not developed or sales not made. *See supra*, pp. 4–6; *cf. Apple Inc.*, 2011 WL 4948567, at *6 (concluding that allegations about reduced innovation and investment, analogous to the FTC's allegations here, "clearly alleged harm to competition more broadly"). The Ninth Circuit in *Forsyth*, for example, treated the defendant's use of market power to inflate its rivals' costs as exclusionary, without further inquiry. That is appropriate because exclusionary conduct is simply that which "reasonably appear[s] capable of making a significant contribution to . . . maintaining monopoly power." *Microsoft*, 253 F.3d at 79 (quoting 3 *Antitrust Law* ¶ 651c, at 78 (3d ed. 1996)); *accord United States v. Dentsply Int'l, Inc.*, 399 F.3d 181, 187 (3d Cir. 2005). Moreover, "in a government equity action" like the one here, "the causal connection between conduct and power can be relatively modest where the only remedy sought is an injunction against continuation of that conduct." 3 *Antitrust Law* ¶ 650a, at 92 (4th ed. 2015).

Qualcomm's reliance (Mot. 3, 11) on *Rambus Inc. v. FTC*, 522 F.3d 456 (D.C. Cir. 2008), to suggest that the FTC must allege an excluded competitor is especially misplaced. *Rambus*—like the cases cited above—does not require anything so drastic; allegations that the defendant's "conduct impaired rivals in a manner tending to . . . protect a defendant's monopoly power" suffice. *Id.* at 464. Certainly, in *Rambus* that standard implicated a stark matter of historical fact (that the FTC had failed to establish): Did Rambus's past conduct exclude competitors, leaving it with a monopoly? But here, the FTC alleges that Qualcomm's scheme is aimed at preserving its

monopoly, which necessarily poses a question about the future effect of allowing Qualcomm's practices to continue. Monopoly-maintenance cases like *Microsoft* are therefore more informative, and, as explained above, anticompetitive conduct that reasonably appears capable of making a significant contribution to maintaining monopoly power is exclusionary.

Finally, Qualcomm's claim (Mot. 11–13) that the FTC has brought a "price squeeze" case forbidden by *Pacific Bell Telephone Co. v. linkLine Communications, Inc.*, 555 U.S. 438 (2009), is flawed several times over. To begin with, granting Qualcomm's motion based simply on *linkLine* (and ignoring the FTC's extensive allegations of anticompetitive effects) would require an exact fit between the facts alleged here and those in *linkLine*. But the correspondence is utterly lacking. Qualcomm is not a vertically integrated firm like the *linkLine* defendant, nor is it trying to squeeze out a downstream competitor in the handset market; indeed, Qualcomm does not even *participate* in that market. Moreover, Qualcomm uses the "price squeeze" epithet too loosely. If this is a "price squeeze" case, then so too is any case in which a monopolist prevents competition on the merits by raising its customers' cost of turning to a rival. A rival in that position will always feel its price squeezed by pressure to insulate its customer from the monopolist's anticompetitive acts.

Rather, *linkLine* stands for the proposition that two practices that are generally procompetitive (there, price-cutting in the retail market and price-setting in the wholesale market) do not become anticompetitive when used in combination—for antitrust courts must tread with caution in condemning conduct that may well be procompetitive. *See Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 414 (2004). In total contrast, what Qualcomm has done here is use its monopoly power in one market to reach agreements that raise costs paid in another market. Absent some further justification (which the FTC pleads is absent, Compl. ¶ 145), no reason exists to dwell on the possibility that imposing a surcharge on competitors' products is procompetitive. And there is no allegation here of a competitive price cut by Qualcomm.[3] Indeed, *Premier Electrical* and *Forsyth* definitively hold that schemes like

[3] Certainly, Qualcomm may reduce the nominal cost of chipsets to offset an increase in the nominal cost of the license for those chipsets, in an effort to camouflage its scheme by claiming its royalties are nondiscriminatory. But that is not a price cut. It merely reflects Qualcomm putting its revenue into its left pocket instead of its right pocket.

Qualcomm's have a variety of anticompetitive, market-distorting effects. Moreover, Qualcomm's use of a tying arrangement—to deploy power in one market to disrupt the price-setting mechanism in another—has no counterpart in *linkLine*, where the defendant was, at most, alleged to have exercised existing power in the wholesale market to set a price in that same market. The FTC does not suggest that there is any particular price that Qualcomm must charge for a license—only that it cannot arrive at that price by exerting its dominance in the chipset market to thwart OEMs from seeking a neutral determination of the royalties for Qualcomm's SEPs.

In all events, even if the Complaint did state a "price squeeze" theory of anticompetitive harm, this case would differ from *linkLine* because (as explained immediately below), unlike the defendant in *linkLine*, here Qualcomm *does* have a duty to grant licenses—to both OEMs and its competitors—grounded in the antitrust laws and aimed at preventing precisely the sort of exclusion alleged here.

II. THE FTC HAS STATED A VALID CLAIM BASED ON QUALCOMM'S BREACH OF ITS FRAND COMMITMENTS TO LICENSE ITS SEPS TO ITS COMPETITORS

The FTC alleges that Qualcomm has "consistently" violated its FRAND commitments "to license its SEPs to competing suppliers of baseband processors." Compl. ¶ 112. This conduct violates the antitrust laws.

"Standards setting organizations . . . play an important role in the wireless communications industry." *Apple Inc.*, 2011 WL 4948567, at *1. But "judicial acceptance[] of private standard setting is [not] without limits." *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 309–10 (3d Cir. 2007). Because private standard-setting associations are comprised of firms with horizontal and vertical business relations, the only way SSOs are "permitted at all under the antitrust laws" is if "meaningful safeguards" are put in place to "prevent the standard-setting process from being biased by members with economic interests in stifling product competition." *Id.* What is more, "the creation of technical industry standards presents the potential for anticompetitive effects"—including patent lock-in. *Apple Inc.*, 2011 WL 4948567, at *2. This risk is particularly acute where competitors must use a SEP-holder's patented technology. In that circumstance, the SEP-holder can perpetuate its dominant position by "demand[ing] exorbitant licensing fees or other

terms." *Id.*; *see Microsoft Corp. v. Motorola, Inc.*, No. C10-1823JLR, 2013 WL 2111217, at *6 (W.D. Wash. Apr. 25, 2013) ("[FRAND] rules help to ensure that standards do not allow essential patent owners to extort their competitors or prevent competitors from entering the marketplace."); *Research In Motion Ltd. v. Motorola, Inc.*, 644 F. Supp. 2d 788, 794 (N.D. Tex. 2008) (same).

To avoid the risk of patent lock-in and to provide the necessary "meaningful safeguard" against the inherent antitrust concerns associated with private standard-setting, SSOs may require SEP-holders to make and abide by FRAND commitments. *See, e.g.*, *Apple, Inc. v. Motorola, Inc.*, 869 F. Supp. 2d 901, 913 (N.D. Ill. 2012) (Posner, J.), *aff'd in part, rev'd in part on another ground*, 757 F.3d 1286 (Fed. Cir. 2014). These commitments ensure that SEP-holders do not abuse the market power obtained from standardization to inflict harm on competitors by refusing to license SEPs to them.[4] Qualcomm therefore wrongly characterizes (at 16) the FTC's claims as seeking to impose an "antitrust duty to assist competitors." Quite the contrary, adherence to FRAND commitments, especially to license SEPs to competitors, is the price that SEP-holders like Qualcomm must pay to avoid antitrust violations in the first place.

For this reason, courts—including this one—have held that "fraudulent FRAND declarations that are used to induce SSOs to adopt standards essential patents can be monopoly conduct for the purpose of establishing a Section 2 claim." *Apple Inc.*, 2011 WL 4948567, at *4. The same is true when a SEP-holder, like Qualcomm, reneges on its FRAND commitment to license SEPs to competitors. That behavior results in *the same* anticompetitive harms that courts have considered in the fraud-related cases. *See, e.g.*, *Research In Motion Ltd.*, 644 F. Supp. 2d at 795–96 (describing FRAND commitments as "a 'bulwark' against the unlawful accumulation of monopoly power that antitrust laws are designed to prevent" and holding that efforts to "side-step this bulwark . . . are harmful . . . to competition in general"); Compl. ¶ 50, *Research In Motion Ltd. v. Motorola, Inc.*, No. 3:08CV00284 (N.D. Tex. Feb. 16, 2008). Just as in those cases, the SSO's "reliance" on the SEP-holder's promise, coupled with its subsequent breach of that promise, constitutes "actionable anticompetitive conduct." *Apple Inc.*, 2011 WL 4948567, at *4.

[4] In addition, as Qualcomm's no-license-no-chips policy illustrates (*supra*, p. 16), SEP-holders may indirectly inflict harm on competitors through the licensing conditions they impose on OEMs dealing with competitors.

This Court's decision in *Apple* is fully consistent with these principles. There, the plaintiff expressly alleged that the defendant made deceptive representations to the SSO, *see* Counterclaim ¶ 177, *Apple Inc. v. Samsung Elecs. Co.*, No. 5:11-cv-1846-LHK (N.D. Cal. July 21, 2011), ECF No. 124, and this Court held that those allegations did not satisfy the heightened pleading standards under Federal Rule of Civil Procedure 9(b), *see Apple Inc.*, 2011 WL 4948567, at *4. This Court did not have occasion to consider whether a SEP-holder's breach of its FRAND commitment to license SEPs to competitors violates the Sherman Act in the absence of fraud. For the reasons stated above, it does. And the FTC has properly alleged such a claim here.

III. THE FTC HAS PROPERLY ALLEGED A CLAIM BASED ON QUALCOMM'S EXCLUSIVE SUPPLY ARRANGEMENTS WITH APPLE

The FTC has alleged that Qualcomm anticompetitively coerced Apple to source premium baseband chipsets from Qualcomm by conditioning multi-billion dollar rebates and penalties on Apple's exclusive use of those chipsets. In response, Qualcomm argues (Mot. 2–3) that the FTC does not allege that its so-called "incentive payments" to Apple "result in predatory pricing or have conditions that substantially foreclose competitors from making sales." But the Complaint clearly states (¶ 125.c) that the rebates and penalties under Qualcomm's agreements with Apple were "sufficiently large that, if they were attributed as discounts to the price of Qualcomm baseband processors reasonably contestable by a Qualcomm competitor, the resulting price of Qualcomm processors would be below Qualcomm's cost." Critically, this paragraph alleges that these arrangements resulted in a below-cost price for Qualcomm's chipsets that violates the Ninth Circuit's test in *Cascade Health Solutions v. PeaceHealth*, 515 F.3d 883, 903 (9th Cir. 2008). In so doing, the Complaint plausibly alleges that Qualcomm's exclusive arrangements with Apple "have a significant effect in preserving its monopoly" in the premium LTE chipset market, *Microsoft*, 253 F.3d at 71, and thus states a cause of action for anticompetitive exclusion.

In addition to alleging below-cost pricing, the Complaint plausibly alleges (¶ 130) that Qualcomm's agreements with Apple "foreclosed a substantial share of the market for premium LTE baseband processors." For starters, it alleges that "[s]everal former competitors of Qualcomm have sold off or shuttered their baseband processor businesses" as a result of

Qualcomm's actions. Compl. ¶ 139. These include established baseband chipset providers—like Broadcom and Marvell Technology Group—that were thwarted from making significant inroads in the LTE chipset market and stopped offering baseband chipsets altogether.

Based on its own marketplace experience, moreover, Intel believes that following discovery the FTC will be able to prove that the exclusive arrangements with Apple foreclosed the share of the market that the Ninth Circuit has required in Section 1 cases, *see Tele Atlas N.V. v. Navteq Corp.*, No. C-05-01673 RMW, 2008 WL 4809441, at *21 (N.D. Cal. Oct. 28, 2008), as well as the more relaxed standard that courts have required in Section 2 cases, *see Microsoft*, 253 F.3d at 70. Similarly, the FTC will be able to establish the additional factors that courts have considered when determining market foreclosure. *See R. J. Reynolds Tobacco Co. v. Philip Morris Inc.*, 199 F. Supp. 2d 362, 389 (M.D.N.C. 2002) ("[T]o determine substantiality in a given case, in addition to the foreclosure percentage, courts . . . consider the duration of the agreement, the ability of consumers to comparison shop, and their propensity to switch products, the existence of barriers to entry, and the availability of alternative channels of distribution."). The FTC has offered plausible allegations regarding these factors. *See* Compl. ¶ 125.b (inability to comparison shop); ¶ 126 (duration); ¶ 132 ("barriers to entry").

If that were not enough, the Complaint correctly alleges that Apple has an outsized impact on the premium LTE chipset market given the company's role and stature in the handset industry. As the Complaint avers (¶ 129), Apple is a "particularly important OEM from the perspective of a nascent baseband processor supplier and confers benefits on a nascent supplier that make the supplier a stronger contender for other OEMs' business." It accurately describes the many ways supplying Apple can advantage suppliers, including by providing financial, technological, and reputational benefits.

Intel can confirm that these allegations capture the reality of the premium chipset market. The Complaint alleges (¶ 45) that, historically, Intel has had "limited LTE baseband processor sales and achieved modest success . . . only recently, when it began to supply a portion of Apple's baseband processor requirements for the iPhone 7." This prior performance was significantly impacted by Qualcomm's exclusive contracts with Apple, as well as Qualcomm's earlier efforts to

defeat adoption of the WiMAX standard. *See* Compl. ¶ 120.[5] During this period, Apple would have gained advantages from working with Intel, including that Intel's innovative chipsets met Apple's technical standards, Intel's prices were competitive, and Apple sought to be served by multiple suppliers. But Qualcomm's conduct locked Intel out of Apple for four years. As a result, Intel lost substantial revenues, the vital ability to scale to other customers more quickly, and the many benefits that come from working with the world's most commercially successful mobile phone.

In short, Qualcomm's arrangements with Apple put Intel's commercial success at risk and will do so in the future if Qualcomm is allowed to persist in its anticompetitive tactics. As the only remaining competitor in the premium LTE chipset market, *see supra*, p. 6, any harm to Intel's premium chipset business will have profound anticompetitive effects on the market as a whole. At a minimum, the Complaint correctly alleges (¶ 141), that "[c]ompetition often drives firms to innovate in next-generation technologies and products." *See Apple Inc.*, 2011 WL 4948567, at *6. Judicial blessing of Qualcomm's coercive arrangements with Apple would inhibit innovation and the "substantial benefits" that innovation brings to consumers. Compl. ¶ 142.

Qualcomm nevertheless contends (at 20) that the fact that Intel recently began supplying Apple with premium LTE chipsets for the iPhone 7 "definitively refutes" the FTC's claim. But that argument gives short shrift to *why* Intel finally was able to supply Apple after all of these years. It is far more plausible that the many investigations across the globe deterred Qualcomm from imposing another illegal exclusive deal on Apple. *See supra*, p. 5. If Qualcomm were unconstrained by investigations like these, there is no telling what anticompetitive arrangements it would seek to impose on Apple (or other purchasers) to entrench its monopoly. Put simply, actions by courts and regulators have played a crucial role in shining a light on Qualcomm's anticompetitive behavior. Without that scrutiny, and the safeguards that suits like this one can

[5] The WiMAX standard was supported by Sprint, Intel, Cisco, Samsung, Nokia, and Motorola, among others, and offered an alternative to the 4G standard that Qualcomm preferred. Consistent with the FTC's allegations here, Apple's recent complaint reveals that Qualcomm offered Apple substantial royalty rebates in exchange for a promise to undermine support for WiMAX. According to Apple, Qualcomm "forced [it] to renounce WiMAX just as WiMAX was gaining traction in the marketplace." Apple Compl. ¶ 109.

provide, Intel never could have competed on even terms with Qualcomm in a multi-billion dollar market that impacts the lives and livelihoods of millions of people around the world.

Respectfully submitted.

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