No. 19-16122

United States Court of Appeals for the Ninth Circuit

FEDERAL TRADE COMMISSION,
Plaintiff – Appellee,

v.

QUALCOMM INCORPORATED, A DELAWARE CORPORATION,
Defendant – Appellant,

SAMSUNG ELECTRONICS COMPANY, LTD.;
SAMSUNG SEMICONDUCTOR INC.; INTEL CORPORATION; ERICSSON, INC.;
SAMSUNG ELECTRONICS AMERICA, INC.; MEDIATEK INC.,
Intervenors,

NOKIA TECHNOLOGIES OY,
Intervenor.

Appeal from the U.S. District Court
for the Northern District of California
The Honorable Lucy H. Koh (No. 5:17-cv-00220-LHK)

OPENING BRIEF FOR APPELLANT QUALCOMM INCORPORATED

Gary A. Bornstein
Antony L. Ryan
Yonatan Even
M. Brent Byars
CRAVATH, SWAINE & MOORE LLP
825 Eighth Avenue
New York, NY 10019-7475
(212) 474-1000

Thomas C. Goldstein
Kevin K. Russell
Eric F. Citron
GOLDSTEIN & RUSSELL, P.C.
7475 Wisconsin Avenue, Suite 850
Bethesda, MD 20814
(202) 362-0636

Counsel for Appellant Qualcomm Incorporated
(additional counsel listed on inside cover)

Robert A. Van Nest
Eugene M. Paige
Cody S. Harris
Justina Sessions
KEKER, VAN NEST & PETERS LLP
633 Battery Street
San Francisco, CA 94111-1809
(415) 391-5400

Willard K. Tom
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue NW
Washington, DC 20004-2541
(202) 739-3000

Geoffrey T. Holtz
MORGAN, LEWIS & BOCKIUS LLP
One Market, Spear Street Tower
San Francisco, CA 94105-1596
(415) 442-1000

Richard S. Taffet
MORGAN, LEWIS & BOCKIUS LLP
101 Park Avenue
New York, NY 10178-0060
(212) 309-6000

CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1, Qualcomm Incorporated ("Qualcomm") states that it has no parent corporation and that no publicly held corporation owns 10% or more of Qualcomm's stock.

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

Federal Cases

State Cases

Federal Statutes

State Statutes

Rules

Other Authorities

JURISDICTIONAL STATEMENT

The District Court had jurisdiction under 28 U.S.C. §§ 1331, 1337(a) and 1345. The District Court entered a final judgment disposing of all parties' claims on May 21, 2019. 1ER1. Qualcomm noticed this appeal on May 31, 2019. 2ER347. *See* Fed. R. App. P. 4(a)(1)(B). This Court has jurisdiction pursuant to 28 U.S.C. § 1291.

STATEMENT OF THE ISSUES

1. Did the District Court err in holding that Qualcomm is subject to an antitrust duty to deal that requires Qualcomm to provide its chip manufacturing rivals with exhaustive licenses to Qualcomm's standard essential patents?

2. Did the District Court err in holding that Qualcomm's patent licenses to original equipment manufacturers are anti-competitive because they impose an "unreasonable" "surcharge" on the chips sold by Qualcomm's rivals and thereby substantially foreclose competition in certain chip markets?

3. Did the District Court err in holding that volume discounts that Qualcomm offered to chip customers were anti-competitive exclusive dealing arrangements?

4. Should this Court vacate all or portions of the District Court's injunction?

5. Did the District Court err in granting summary judgment that Qualcomm's commitments to two standards development organizations require Qualcomm to provide chip manufacturers with exhaustive licenses to Qualcomm's standard essential patents?

STATUTORY PROVISIONS

Pertinent statutory provisions are included in the attached Addendum.

INTRODUCTION

Through risky research and development spanning well over three decades, Appellant Qualcomm has invented technologies that are fundamental to the wireless revolution. Qualcomm also develops and sells market-leading cellular modem chips—integrated circuits that, together with other components, facilitate the communication of cellphones with wireless networks.

Qualcomm's patent portfolio is vast and central to the industry; it currently encompasses over 140,000 patents and patent applications that relate to nearly every feature of a cellphone. Qualcomm therefore recoups

its research and development by licensing its portfolio of patents to original equipment manufacturers (OEMs) that make cellphones, as every cellphone invariably practices Qualcomm's technology.

Conversely, Qualcomm does not grant (and never has granted) "exhaustive" licenses to chip manufacturers, because under the doctrine of patent exhaustion, such licenses would interfere with Qualcomm's ability to enforce some of its patents against OEMs. Specifically, OEMs could buy those "exhaustively" licensed chips and assert that they need not take a license to any Qualcomm patents the chips embody. Because Qualcomm licenses its patents at the OEM level, chipmakers make and sell chips practicing some Qualcomm technologies without paying Qualcomm any royalties *at all*.

Qualcomm's own modem chips also practice some of Qualcomm's patents. But Qualcomm does not include the value of any of its patented technology in the price it charges OEMs for its chips. Instead, Qualcomm collects the value of its patents only through its license agreements with OEMs, and it separately prices its chips based on design, features, and the competitive landscape. And to avoid the exhaustion of its patents through the sale of its own chips, Qualcomm sells its chips only to OEMs

that are licensed to its patents—a policy the Federal Trade Commission (FTC) pejoratively refers to as "no license, no chips."

The result is that when an OEM seeks to purchase a modem chip, Qualcomm and its chip rivals *each* charge prices that reflect the value of their respective chips as determined by the marketplace. Those chip prices do not include the value of any Qualcomm patents the chips practice. And Qualcomm charges OEMs the same royalty for their use of Qualcomm's patented technology regardless of the OEM's choice of chips; the royalty on the cellphone does not change whether the OEM selects a modem chip made by Qualcomm or by a competitor.

Under these business arrangements, Qualcomm receives two revenue streams: one for licensing of its inventions and one for chips. When Qualcomm's risky investments are successful, as they often have been, Qualcomm's licensing business provides Qualcomm with resources it can invest in developing new, innovative technologies. Some of these technologies may later be used by its competitors to improve their own chips, *at no cost to them*. By contrast, rival chipmakers generally do not make the

same investments, do not engage in the system-wide innovation Qualcomm specializes in, do not have a broad patent portfolio they can license, and therefore profit only from the sale of chips, not from licensing.

The District Court found that Qualcomm had monopoly power in markets for two kinds of modem chips. Qualcomm acquired that market position through ingenuity and business acumen. The Court held that certain features of Qualcomm's business model violate the Sherman Act by anti-competitively maintaining those monopolies. That ruling departed from the FTC's theory at trial and the Department of Justice has condemned it. The District Court's ruling has three bases, each of which conflicts with binding Supreme Court and Ninth Circuit precedent.

First, the District Court held that antitrust law imposes on Qualcomm a duty to grant exhaustive licenses to rival chipmakers. But the Court did not—and could not—find *either* of the facts required to find that duty under settled precedent: that Qualcomm departed from a prior course of dealing; and that it sacrificed short-term profits only to drive out its rivals and reap monopoly profits down the road. That precedent reflects the Supreme Court's admonition that requiring a firm to share the source of its advantage with rivals carries with it significant risks:

collusion among competitors, undermining the investment incentives that legitimate monopoly profits create, and imposing on courts obligations of judicial administration for which they are ill-suited. This case embodies all those risks.

Second, the District Court held that Qualcomm's monopoly in the two chip markets, together with its policy of selling chips only to licensed OEMs, lets it exact "unreasonable" royalties from OEMs that "need" Qualcomm's chips to effectively compete. When those royalties apply to phones that use rivals' modem chips, they supposedly act as a "surcharge" that harms rival chipmakers. Specifically, the District Court concluded that Qualcomm's royalties put the rivals at a financial disadvantage, so they do not invest as much in new technology, and eventually do not compete as well for the sale of chips.

To so conclude, the Court violated well-established law in deeming Qualcomm's royalties to be unreasonable. But even unreasonable royalties would not harm competition. As precedent makes clear, and as the Department of Justice itself has advised this Court, high royalties do not make out a Sherman Act violation for a simple reason—they are not anti-

competitive. Qualcomm's royalties are neither paid by nor harm competitors, nor do they obstruct rivals in competing on the merits. More than that, the District Court did not find any of the facts necessary to establish the attenuated, multi-step chain of causation that supposedly turns Qualcomm's OEM royalties into costs borne by its rivals that prevent them from innovating; it simply (and erroneously) assumed competitive harm.

Third, the District Court held that Qualcomm's discounts on chip prices are *de facto* unlawful exclusive dealing arrangements. But that holding ignored settled liability standards. Because discounting benefits consumers, discounts cannot be subject to condemnation unless (among other things) they bring prices below cost. Even *de jure* exclusive dealing arrangements are potentially unlawful only when they foreclose a substantial share of the market for long enough to harm competition market-wide. The FTC did not offer any such evidence, and the District Court made no such finding.

Ultimately, the District Court's holdings in this case threaten the very policies that antitrust law is intended to promote. The District Court principally faulted Qualcomm for charging higher prices. But that type

of theory does not make out a monopolization claim, because higher prices are not exclusionary. To the contrary, they encourage customers to switch to competing suppliers. To the extent there were limited alternative suppliers in the markets in which Qualcomm has monopoly power, that fact is entirely consistent with the conclusion that Qualcomm's rivals in those markets failed to compete—*i.e.*, they did not offer chips that were as good at low enough prices.

But that has nothing to do with the condemned conduct; Qualcomm's OEM licenses are efficient and competition-promoting, and rival chipmakers are able to use Qualcomm's patented technology to offer products that compete with Qualcomm's, without paying Qualcomm royalties. Through royalties the OEMs pay, Qualcomm simply obtains the reward for the $60 billion it has invested over time in technology that nay-sayers said would never take hold. To be sure, Qualcomm's patent royalties give it financial wherewithal and make it a formidable competitor. But its competitors—Intel, Samsung, Huawei and the like—are likewise formidable and well capitalized. No one contends that Qualcomm has rested or could rest on its laurels. In the absence of evidence that Qualcomm's agreements with OEMs foreclosed chip competitors from the

market—and no such evidence was proffered—the FTC's claims fail and the judgment should be reversed.

STATEMENT OF THE CASE

I. Background

1. The cellular industry is thriving. Over its brief history, prices of cellphones and modem chips have dropped; consumers have purchased billions of cellphones; data speed and system capacity have skyrocketed; and the cost of cellular service (particularly with respect to data) has plummeted. 2ER510:3-16; 2ER524; 2ER511:7-20; 2ER526; 2ER417:7-2ER418:25; 6ER1409-6ER1411.

Qualcomm is the world's leading cellular technology company. Its specialty is developing "systems solutions" that address the mobile industry's principal challenge: efficiently utilizing scarce cellular spectrum to permit the exponential growth of cellular communication carried on that spectrum. 3ER712:21-3ER713:12; 3ER718:21-24. The company was founded in 1985 by engineers and academics in the fields of communication theory, spectrum engineering, and digital signal processing.

Qualcomm's principal early innovations enabled the application of Code Division Multiple Access (CDMA) technology in commercial cellular

systems, which (among other things) improved the stability and efficiency of voice calls, expanded the capacity of cellular systems, and (along with later Qualcomm innovations) facilitated data transmission. 3ER715:7-3ER718:24; 3ER720:24-25. The industry adopted variants of CDMA technology as the basis for all third-generation (3G) standards. 3ER721:15-3ER722:4. Anticipating growing demand for fast mobile Internet access, Qualcomm then developed innovations that are essential to fourth-generation (4G LTE) standards, vastly improving data speeds and system capacity. 2ER452:23-2ER454:18; 2ER468:1-2ER469:23.

Having invested nearly $60 billion in research and development, Qualcomm owns a patent portfolio that includes approximately 140,000 patents and pending patent applications worldwide. 3ER632:14-17. These include many standard essential patents (SEPs), and an even greater number of Non-SEPs. 3ER630:5-15. Cellular SEPs relate to technologies that Standards Development Organizations (SDOs), through the consensus of industry participants, choose to include in technical standards that underlie successive generations of cellular technology—*i.e.*, 2G, 3G, 4G, and (now-emerging) 5G. Patentees contribute their patents to the

technical standard, committing contractually to license the SEPs covering those inventions for devices that implement the standard on "fair, reasonable, and nondiscriminatory" (FRAND) terms. *See, e.g.*, 3ER729:25-3ER730:2; 2ER478:4-8.

2. Qualcomm has always generated revenue by licensing its inventions—predominantly to OEMs that make cellphones, such as Motorola and Samsung. 3ER770:8-14; 3ER723:17-3ER724:18. Substantially all of the world's cellphone OEMs have taken Qualcomm licenses.[1]

Those licenses grant rights under Qualcomm's patents (SEPs and Non-SEPs) for entire cellphones. 3ER557:25-3ER558:5. Some of Qualcomm's patents relate to how the cellphone communicates with the cellular network. 3ER636:23-3ER637:21. Others relate to a broad range of technologies used by the phone, such as multimedia, cameras, location, and user interfaces. 3ER542:10-3ER543:14; 3ER546:10-22.

[1] The licensee typically provides consideration, such as up-front payments, "running" royalties, and/or cross-licenses to its own patents. 3ER558:6-20. Running royalties are generally calculated by multiplying a "royalty rate" by a "royalty base." 2ER429:16-2ER430:9. Qualcomm's licenses generally calculate the running royalty as a percentage of the (capped) net selling price of a cellphone. 3ER564:15-24.

Qualcomm's OEM licensing model is predicated on an essential corollary: Qualcomm never grants "exhaustive" patent licenses to chipmakers. 4ER817:13-15; 3ER586:8-15. "Exhaustion" is a patent law doctrine limiting a patentee's right, following the authorized sale of a patented product, to seek patent law remedies against downstream users of that product. *See Quanta Computer, Inc. v. LG Elecs., Inc.*, 553 U.S. 617, 625 (2008). If Qualcomm were to grant a chipmaker an exhaustive license to its patents, an OEM could buy those chips and claim that it had no obligation to license any Qualcomm patents "substantially embodied" in those chips. *Id.* at 637; *see* 4ER834:9-4ER835:1; 4ER857; 3ER767:20-3ER768:3; 3ER577:14-3ER578:22.

Because it enforces its patents at the OEM level, Qualcomm does not prevent chipmakers from having access to or using its cellular SEPs. Chipmakers practice some of those patents, and do so at no cost, without taking a license from Qualcomm. 2ER428:5-16; 2ER445-2ER446.

Qualcomm's OEM licensing model maximizes the value of its portfolio. An alternative would be to issue two different kinds of licenses: (1) exhaustive licenses to chipmakers, and also (2) distinct licenses to

OEMs for the remaining patents that are not exhausted by the component-level licenses. 3ER586:25-3ER588:8; 2ER421:10-25. But differentiating patents and patent claims between those categories would inevitably produce protracted disputes and litigation, as well as other inefficiencies. 3ER586:25-3ER588:21; 2ER421:10-2ER422:22; 2ER445.

The inefficiencies and impracticality of such a "multi-level" licensing scheme are so serious that no major industry participant uses it. Every major cellular SEP licensor grants exhaustive licenses to OEMs, not to chipmakers. 3ER751:15-19; 4ER847:22-4ER848:22; 2ER475:1-15; 2ER444-2ER445; 2ER443; 2ER440-2ER441. In turn, over the past decade, no chipmaker has brought an action seeking an exhaustive license.

3. In 1995, Qualcomm expanded beyond licensing to develop and sell cellular modem chips. 2ER392:5-13; 6ER1406. The company is now one of the world's leading chip suppliers. Qualcomm's technology, product design and continual integration of multiple features into a single chip

have repeatedly given it a clear—albeit temporary—first-to-market advantage. 3ER796:10-14; 3ER803:24-804:22; 3ER735:1-24.[2]

But competition in the chip business is fierce. Qualcomm's rivals catch up—every time. 3ER804:13-22. This competition is facilitated by the no-cost access that competing chipmakers have to standardized technologies, including Qualcomm's. 2ER428:5-16; 2ER445-2ER446.

By the time Qualcomm began selling chips, its model of licensing its technology to OEMs on the basis of the entire cellphone was already well established. 3ER724:6-11; 3ER725:6-13. Qualcomm elected to maintain that model, and therefore sold its chips at prices that are independent of the licensing fees. 3ER793:2-14. Qualcomm's chip prices do not capture the value of Qualcomm's patents; that value is collected exclusively through Qualcomm's OEM-level patent licenses. 3ER766:16-3ER767:19.

[2] For example, Qualcomm supplied the first "system-on-a-chip" that integrated camera and MP3 audio playback functions, the first multi-mode "global roaming" chip that permitted cellular phones to connect to cellular networks around the world, the first "multi-mode" LTE modem chip that allowed OEMs to use a single modem for both 3G and 4G communications, and the first modem chip that supported gigabit-per-second data transmission speeds. 3ER547:1-551:11.

Because Qualcomm prices its chips separately from its licensed technology, it necessarily declines to sell its chips to an OEM that does not take a Qualcomm patent license. Otherwise, the unlicensed OEM could refuse to take a license, claiming that its purchase of chips from Qualcomm exhausts some of Qualcomm's patent rights. 4ER834:9-4ER835:1; 4ER857; 3ER767:20-3ER768:3; 3ER577:14-3ER578:22. Effectively, OEMs would turn Qualcomm's chip business against its licensing business.[3]

Qualcomm's requirement that an OEM must license Qualcomm's SEPs is naturally discussed during negotiations with OEMs. The OEM knows that if it allows the license to expire, Qualcomm will have no obligation to take new chip orders from the OEM. *See, e.g.*, 4ER820:7-4ER821:10; 4ER823:7-ER824:4.

---

[3] Patent law permits Qualcomm to price its chips separately from its intellectual property and to sell its chips only to licensees. A patentee may enter into a license agreement, then sell its products to the licensee. The license remains valid, and the patent exhaustion doctrine does not prevent the licensor from continuing to collect royalties under the license. *See Impression Prods., Inc. v. Lexmark Int'l, Inc.*, 137 S. Ct. 1523, 1531 (2017) (patent owner may enforce post-sale restrictions through contract); *In re Qualcomm Litig.*, 2018 WL 6062352, at *6 (S.D. Cal. Nov. 20, 2018).

OEMs can contest Qualcomm's licensing rates. The OEM can commit to take a license from Qualcomm (entitling it to purchase chips) with a provision entitling the OEM then to institute arbitration to contest the FRAND licensing rate—without endangering its chip supply. 3ER568:13-3ER569:25; 7ER1530-7ER1531; 3ER572:8-3ER574:25. And OEMs with existing licenses can negotiate the terms of any future license agreement without any interruption to their chip supply. 4ER827:12-22; 4ER830:2-4ER831:5; 3ER585:14-3ER586:5; 3ER607:21-3ER608:25; 3ER611:19-3ER612:4; 7ER1527; 2ER425:12-2ER426:17.

Qualcomm generally prices its chips on a per-unit basis. On occasion, Qualcomm has offered OEMs volume discounts and rebates. 3ER807:4-3ER808:14; 2ER488:1-22. With one large customer (Apple), it entered into agreements under which discounts were contingent; Apple was not required to use Qualcomm chips, but would forfeit or repay some rebates if it used non-Qualcomm chips. 3ER773:11-25; 3ER779:16-3ER780:8. Those agreements terminated by 2016, after Apple sourced chips from Intel. 3ER671:5-9; 7ER1566.

4. Over time, Qualcomm's licensing rates have been relatively stable, 2ER391, 6ER1406, even as its patent portfolio has exploded in size

and breadth, 3ER631:17-3ER632:17, 3ER659. Indeed, Qualcomm's royalties have come down as a proportion of the price of a cellphone. 3ER564:15-3ER565:10. In 1991, Qualcomm began licensing its full portfolio to OEMs, including SEPs and Non-SEPs, at around 5% of the net selling price of licensed cellphones (currently capped at $400, for a maximum royalty of $20 per phone). 4ER813:7-4ER814:3. More recently, Qualcomm established a 3.25% rate for a license to cellular SEPs only. 2ER429:8-15. And, when Qualcomm recently added its 5G patents to the scope of its SEP licenses, it chose not to raise this rate despite the increased scope of the licensed technologies. 2ER428:20-2ER429:17.

Notably, Qualcomm's licensing practices and rates have not depended on its alleged market power, *i.e.*, they did not increase as Qualcomm allegedly gained market power in certain kinds of modem chips, nor did they vary based on whether or not Qualcomm allegedly had market power in the kind of modem chip associated with the relevant standard. 2ER391:2-18; 2ER395:16-2ER397:10; 6ER1406; 6ER1407. And Qualcomm's royalty rates are also nondiscriminatory; the OEM licensee pays the same royalty regardless of whether the phone contains a modem

chip from Qualcomm or someone else. 3ER766:16-3ER767:25; 2ER411:11-2ER412:25.

II. Procedural History

The FTC brought this action asserting, as relevant here, that Qualcomm has violated the Sherman Act by anti-competitively maintaining its monopoly in two modem chip markets. 6ER1167. The District Court agreed with that conclusion—albeit often on grounds that the FTC had not advocated—and entered a sweeping injunction.[4]

1. The District Court found that in 2016 Qualcomm had monopoly power in global markets for CDMA and "premium LTE" modem chips.[5] 6ER1191; 6ER1200. For CDMA, the District Court did not doubt that Qualcomm's market share—at least initially—owed to the fact that the company pioneered the underlying technology, giving it a huge lead in related chip development.

---

[4] The organization of the District Court's opinion is unorthodox. Where the Court separated its factual findings from its legal conclusions, we describe them in the order that reflects the Court's reasoning.

[5] The FTC declined to submit any analysis of Qualcomm's market power after 2016. The District Court refused to permit Qualcomm to introduce or even *proffer* evidence concerning Qualcomm's market power as of, or in the nine months before, trial. 1ER239; 6ER1387; 2ER514:22-2ER520:18; 1ER235.

For "premium LTE," the District Court did not define the market's contours, but broadly characterized it as composed of the particular modem chips developed and then used in relatively expensive cellphones using 4G LTE technology in any given year. 6ER1200-6ER1204. The District Court found that Qualcomm has a substantial "premium LTE" market share because its research and development made it "first-to-market" with each successive generation of chips each year. 6ER1204-6ER1208.

The District Court did not conclude that the two markets in which it found monopoly power comprise a substantial portion of the overall supply of modem chips. The Court also did not find that Qualcomm has monopoly power in connection with any other major or emerging cellular chip markets.

2. The District Court identified three practices of Qualcomm that it labeled "anti-competitive," in the sense that they have a tendency to undermine its chip rivals' profitability and hence their ability to finance the development of new technologies. *First*, the District Court held that Qualcomm violated an antitrust "duty to deal" with rival chip manufacturers by refusing to grant them exhaustive licenses to Qualcomm's SEPs. 6ER1303-6ER1304. The District Court *sua sponte* found that Qualcomm

has such an antitrust duty because it had stopped granting chip rivals *non*-exhaustive SEP licenses. 6ER1303-6ER1304. The District Court also indicated that Qualcomm had acted anti-competitively by violating FRAND commitments to certain SDOs, which the Court concluded (on summary judgment) require exhaustive chip-level licensing. 6ER1291-6ER1292; 6ER1293-6ER1294.

Second, the District Court held that Qualcomm's license fees are anti-competitive because they include a "surcharge" that harms Qualcomm's chip rivals. 6ER1349-6ER1352. According to the Court, Qualcomm acts anti-competitively by leveraging its chip monopoly power to "coerce" OEMs to pay "unreasonable" royalties for patent licenses. 6ER1210-6ER1211.

The District Court then opined that Qualcomm's high royalties benefit Qualcomm, harm consumers, and injure Qualcomm's chip rivals by supposedly raising their costs. 6ER1349. Regarding the benefit to Qualcomm, the Court found that Qualcomm's higher licensing revenues allow it to invest in innovation and produce better products than its rivals. 6ER1364. The District Court held that Qualcomm's monopoly power gives it a competitive advantage, because it "enables Qualcomm to charge

monopoly prices on modem chips." 6ER1364. The result is a "revenue stream[] to invest in research and development, unlike its rivals." *Id.*

Further, the District Court found that Qualcomm's large share in two chip markets prevents it from "becom[ing] isolated and ineffective at embedding its technology into standards." 6ER1366-6ER1367. "[W]ith [Qualcomm's] monopoly power, though, [it] retains a strong presence in the standards." 6ER1367; *see also* 6ER1253. The result, according to the District Court, is a cycle—in which the incorporation of Qualcomm's technology into standards sustains its chip monopolies, "because [it] can embed Qualcomm's technology into cellular standards and enable [it] to win the race to market." 6ER1367.

Regarding harm to consumers, the Court inconsistently found that when OEMs pay higher royalties, (1) they pass those costs on to consumers through higher cellphone prices, 6ER1349, and (2) chipmakers also absorb them, leading to less innovation, 6ER1364.

Regarding harm to rivals, the District Court found that Qualcomm's OEM royalties undermine the ability of its chip rivals to compete. *See, e.g.*, 6ER1361-6ER1374. By that, the Court meant that the rivals

make lower profits and therefore have less money to invest in competitive research and development. *Id*.

The Court focused on the fact that OEMs pay royalties to Qualcomm on phones that use modem chips made by Qualcomm's rivals. 6ER1349. The Court did not doubt that Qualcomm has a legal right to require OEMs to take a Qualcomm license for those phones, given that they practice an array of Qualcomm's patented technologies—including cellular technology and other patented features and functions. But the Court found, relying on a six-step mechanism, that Qualcomm's OEM royalties undermine its rivals' competitive position.

Third, the District Court held that Qualcomm's volume discounting agreements on modem chip purchases function as "exclusive dealing" arrangements that box out its competitors. 6ER1352-6ER1356. The FTC itself asserted this theory at trial only as to a single agreement with a single OEM, which the FTC maintained harmed a single competitor. 3ER694:24-3ER695:5. By contrast, the District Court reached its conclusion with respect to a variety of agreements, without regard to the size of the discount or what share of an OEM's chip supply must be purchased from Qualcomm. 6ER1320-6ER1321. Indeed, the Court held that the

mere offer of a volume discount—even when rejected—is anti-competitive. 6ER1236-6ER1238; 6ER1240-6ER1242; 6ER1320.

3. The District Court Qualcomm's argument that the FTC had failed to prove that Qualcomm's conduct is anti-competitive—*i.e.*, that Qualcomm's actions *in fact* substantially injure competition. After cataloging instances of Qualcomm's conduct, the Court labeled the conduct "anticompetitive." *See, e.g.*, 6ER1279. But by "anticompetitive," the Court meant conduct that would by its nature tend to disadvantage the financial position of Qualcomm's rivals—not that the conduct in fact was exclusionary and thus harmed the competitive process. According to the District Court, it was sufficient to infer liability because that "the modem chip market reflects the *expected outcomes* of Qualcomm's anticompetitive practices." 6ER1372. Specifically, "[m]any of Qualcomm's rivals have exited the market," and "Qualcomm's rivals that remain in the market are hobbled." *Id.*

The District Court then held, citing the D.C. Circuit's ruling in *United States v. Microsoft Corp.*, 253 F.3d 34, 79 (D.C. Cir. 2001), that it could "infer" a causal connection between Qualcomm's licensing practices

and the maintenance of its alleged monopoly power, because such conduct "reasonably appear[s] capable of making a significant contribution . . . to maintaining monopoly power." 6ER1371. In short, the Court deemed it sufficient that Qualcomm's practices reasonably appear capable of contributing to monopoly power.

4. Prior to the District Court's issuance of its findings of fact and conclusions of law, the United States filed a Statement of Interest strongly urging that the District Court hold a separate remedial proceeding. 2ER350. The District Court rejected that suggestion and proceeded immediately to impose a sweeping worldwide injunction—even with respect to license agreements relating to phones manufactured and sold abroad, for use abroad, under agreements approved by foreign competition regulators. The injunction also applies to every form of cellular technology (including forthcoming 5G cellular systems), without regard to whether Qualcomm has any market power. The injunction has three principal provisions:

i. Qualcomm must exhaustively license its SEPs to rival chipmakers on FRAND terms.

ii. Qualcomm must sell chips to OEMs that do not have Qualcomm licenses and, for those OEMs that do have such a license, must not link the license to the OEM's supply of chips from Qualcomm.

iii. Qualcomm must cease entering into actual or *de facto* exclusive dealing arrangements with OEMs.

6ER1393-6ER1397.

The District Court refused to stay the injunction in whole or in part. 2ER345. Qualcomm then moved in this Court for a stay of the injunction's first two provisions. The United States filed a brief supporting that motion, supported by sworn affidavits of senior officials in the Departments of Defense and Energy. 2ER325; 2ER318; 2ER312. The brief opined not only that Qualcomm is likely to succeed on the merits of the appeal, but also that the District Court's injunction would harm U.S. national security by seriously undermining Qualcomm's leadership in developing 5G technology. 2ER325. This Court granted the stay, leaving "for another day" the ultimate determination "[w]hether the district court's order and injunction represent a trailblazing application of the antitrust laws, or

instead an improper excursion beyond the outer limits of the Sherman Act." 2ER280.

SUMMARY OF THE ARGUMENT

The District Court held that three of Qualcomm's business practices violate the Sherman Act and entered a sweeping worldwide injunction. Each theory of liability departed materially from the FTC's own theory of its case. The Department of Justice has subsequently criticized the District Court's liability findings, as well as the scope of the injunction, as contrary to settled precedent and the enforcement practices of the U.S. Government, endangering our national security. 2ER325.

1. The District Court erred in holding that the Sherman Act imposes on Qualcomm a "duty to deal" that requires the company to grant exhaustive licenses to its chip rivals. The FTC neither advanced a "duty to deal" claim in its Complaint, nor defended the Court's ruling in responding to Qualcomm's application for a stay. The Department of Justice has explained that no such duty exists.

Almost without exception, under the Sherman Act, a firm (even a monopolist) has virtually complete discretion to determine with whom it

will (and will not) do business, and on what terms. Antitrust law overrides those private competitive decisions only when two strict requirements are satisfied: (1) a monopolist abandons a profitable course of dealing with its rival; and (2) its only possible purpose is to damage competition. Neither requirement is satisfied here.

First, Qualcomm has not changed its practices. It has always recovered the value of its intellectual property through OEM licensing, while (as a result) its chip rivals have had only non-exhaustive access to its SEPs. Qualcomm has had to change the precise *form* in which it dealt with its rivals to implement those consistent practices, but only in response to changes in patent exhaustion law. Qualcomm has never previously granted exhaustive licenses to chipmakers, as the Court's injunction requires.

Second, Qualcomm's purpose in exhaustively licensing only at the OEM level is to maximize its own licensing revenue commensurate with the value of its intellectual property. That is an entirely pro-competitive goal. Qualcomm's purpose is not to harm competition in modem chips. Because of the company's device-level licensing program, its competitors

have access to its SEPs *while paying no royalties*. So, the strictures of antitrust law are not implicated.

2. The District Court next held that Qualcomm's royalties, paid by OEMs, are "unreasonable" and act as a "surcharge" on the chip sales of its rivals, reducing the money they have available to innovate and thus compete. As a threshold matter, that defies common sense because Qualcomm imposes no "surcharge" on its competitors; it is undisputed that competing chipmakers do not pay *any* royalties to Qualcomm. To nonetheless find Qualcomm liable, the Court relied on a highly attenuated theory predicated on a six-step chain of causation. That theory fails as a matter of law for three independent reasons.

First, as the Department of Justice pointedly explains, the District Court's surcharge theory does not make out a Sherman Act violation. The FTC was required to prove that Qualcomm's conduct was exclusionary and thus substantially undermined the competitive process. But the District Court instead merely found that Qualcomm's otherwise-lawful OEM royalties supposedly indirectly raise its rivals' costs.

The District Court erred because conduct that merely places a rival at a financial or competitive disadvantage does not itself give rise to a

cognizable Sherman Act claim. That is surely true when, as here, the disadvantage results from the alleged monopolist's pro-competitive conduct—such as investing in innovation and licensing intellectual property—and the monopolist neither has a duty to deal with its rivals, *see infra* Part I, nor imposes a disproportionate cost on them, nor structures its license arrangements in a manner that amounts to exclusive dealing. Put simply, Qualcomm's license fees imposed no obstacle to its rivals' ability to compete on the merits—by offering better chips at lower prices.

Second, the District Court erroneously relied only on unsupported speculation—not fact-finding—in concluding that Qualcomm's OEM royalties undermine modem chip competition. This is a "monopoly maintenance" case brought under the "rule of reason" framework. The FTC was therefore required to establish that Qualcomm's conduct both (1) has a substantial anti-competitive effect, and (2) substantially contributes to the maintenance of its monopoly power. Only if a substantial anti-competitive effect is proved may a causal connection between that effect and the maintenance of the monopoly be inferred. Pure inference is acceptable, if at all, *only* with respect to the maintenance of the monopoly.

Here, the Court inferred that Qualcomm's allegedly "unreasonable" royalties injure its rivals' ability to compete, without making *any* factual findings or relying on *any* economic evidence regarding *any* of the following essential steps in its chain of reasoning: (1) the proportion of Qualcomm's royalties that are "unreasonable"; (2) the extent to which OEMs attribute Qualcomm's royalties to its competitors in the allegedly monopolized markets; (3) the extent to which OEMs therefore reduce their prices or purchases from Qualcomm's chip rivals; (4) the extent to which those lower prices or purchases reduce the rivals' margins; (5) the extent to which those reductions in margins reduce the rivals' ability to engage in research and development; and (6) the extent to which rivals' ability to compete with Qualcomm in the allegedly monopolized markets turns on that research and development, as opposed to other factors. Inference with respect to any of the steps is problematic, but here the District Court impermissibly rested its liability finding entirely on assumptions about how the markets operate when the finding must be based on actual evidence instead.

Third, the District Court's conclusion that Qualcomm's royalties are "unreasonable" was based on legal error. Settled law recognizes that

one form of evidence best reflects the reasonableness of Qualcomm's royalty rates: the rates Qualcomm received for the same patent portfolio in hundreds of license agreements that are unaffected by any alleged monopoly power.

Qualcomm's royalties have been established and accepted in arm's-length transactions in circumstances where Qualcomm is not alleged to hold monopoly power, in the narrowly defined markets for CDMA and "premium" LTE modem chips. The same royalties apply, without significant variation, across all the different standards, regardless of whether Qualcomm allegedly had market power in the associated modem chips. Qualcomm's established royalty is the best measure of what constitutes a reasonable royalty. The District Court erred in relying instead on a facile comparison to rates for other patent portfolios belonging to other SEP licensors, which are not technologically or economically comparable to Qualcomm's.

3. The District Court erroneously held that an array of Qualcomm's actual and proposed chip discounting agreements with OEMs are "exclusive dealing" arrangements, which the Court then held are prohibited because they substantially foreclose competition. The District Court's

ruling went far beyond the FTC's theory at trial that a single discounting agreement injured a single Qualcomm competitor for a limited number of years.

Qualcomm does not enter into "exclusive dealing" agreements. Any OEM may do business with any other chip supplier without violating its contract with Qualcomm. Instead, Qualcomm sometimes offers discounts if its customers buy a lot of its chips. Discounting is pro-competitive; it lowers prices. The Sherman Act therefore treats discounting arrangements as unlawful only if they involve something more that is exclusionary and substantially harms the competitive process. But the District Court identified nothing of the sort. With respect to one agreement with Apple, the Court merely stated that Apple would have been required to refund substantial advance payments if it used another chip supplier. But that too is simply a form of discount.

The District Court independently erred because Qualcomm's agreements did not substantially foreclose competition (even if they were exclusive). Substantial foreclosure exists only when competitors lose access to at least 40% of the market, a finding the District Court did not—and could not—make here. Even if the Court were correct that a somewhat

lower standard should apply in a monopoly maintenance action, the Court did not find that any of Qualcomm's agreements had anything *remotely close* to such an effect.

4. The Court should reverse or vacate the District Court's injunction, for three independent reasons aside from the FTC's failure to prove liability. *First*, the District Court did not find that Qualcomm possessed monopoly power in any market at the time of trial or would have monopoly power in the future. The FTC Act authorizes a prospective injunction only if the antitrust violation is ongoing at the time of trial or there is a reasonable prospect it will otherwise recur in the future. That standard could be satisfied here only if Qualcomm both (1) will continue to engage in the same allegedly anti-competitive conduct, *and also* (2) will continue to hold monopoly power. The District Court disregarded the second requirement, considering Qualcomm's market power only as of 2016—two years before trial, in a dynamic and rapidly changing industry.

The Court specifically erred in applying the injunction to forthcoming 5G cellular technology. No market for 5G chips even existed at the time of the Court's ruling. Moreover, there is no evidence Qualcomm will exercise monopoly power with respect to it.

Second, the District Court erroneously held that its finding of a Sherman Act violation automatically required it to enter an injunction. The FTC Act authorizes an injunction only when supported by a balancing of the equities and by the public interest. But the District Court deemed those factors to be irrelevant as a matter of law. Here, the interests of Qualcomm, the industry, and the public in Qualcomm's licensing program continuing to drive advances in cellular technology substantially outweigh any attenuated impact on competition in chip markets. In addition, the District Court refused to hold a remedial proceeding in which the United States, for example, would have had the opportunity to detail how the injunction would substantially harm national security interests by undermining U.S. leadership in forthcoming 5G technology. The public interest therefore substantially weighs against the entry of an injunction.

Third, the District Court erred in adopting a categorical, worldwide injunction. The Court ignored two vital principles: U.S. antitrust law does not apply to wholly foreign commerce and U.S. courts in appropriate cases defer to foreign regulation as a matter of international comity. Here, the injunction applies to license agreements that have been entered

into pursuant to resolutions of foreign regulatory inquiries. For example, certain of Qualcomm's license agreements cover only Chinese patents and phones that are made and sold for use in China. There is no nexus to U.S. commerce. As the Department of Justice explained, the injunction thereby exceeds the scope of U.S. antitrust law and the accepted enforcement approach of U.S. regulators.

5. The Court should vacate the District Court's decision to grant the FTC partial summary judgment that Qualcomm's agreements with two SDOs require the company to grant exhaustive licenses to its chipmakers. The Court held that both agreements were unambiguous. In fact, to the extent it was even appropriate for the District Court to decide this pure question of private contract law in this FTC antitrust enforcement action, disputed issues of material fact required that this question be resolved at trial. Qualcomm introduced extensive evidence regarding the accepted meaning of the relevant terms in the industry. In particular, the parties to the agreements themselves do not read them as the District Court did: the FTC's own expert acknowledged that the industry practice

is to license cellular SEPs at the device level. The District Court improperly ignored this important extrinsic evidence of the agreements' meaning.

STANDARD OF REVIEW

On appeal of a judgment following a bench trial, this Court reviews conclusions of law and mixed questions of law and fact *de novo*. *OneBeacon Ins. Co. v. Haas Indus., Inc.*, 634 F.3d 1092, 1096 (9th Cir. 2011). Findings of fact are reviewed for clear error. *Id.*

The District Court's grant of a permanent injunction is reviewed for abuse of discretion and application of the correct legal principles, *Fortyune v. American Multi-Cinema, Inc.*, 364 F.3d 1075, 1079 (9th Cir. 2004), while questions of law relating to the injunction are reviewed *de novo*, *see United States v. Hovespian*, 359 F.3d 1144, 1155 (9th Cir. 2004).

This Court reviews the grant of partial summary judgment *de novo*. *Fontana v. Haskin*, 262 F.3d 871, 876 (9th Cir. 2001).

ARGUMENT

The District Court's decision improperly deploys the Sherman Act to thwart the legitimate business practices of a highly innovative company. Departing substantially from the FTC's own theory of its case, the Court deemed unlawful conduct by Qualcomm that is at the very least

presumptively pro-competitive. Not surprisingly, despite decades of precedent under federal antitrust law, none of the District Court's theories fit within any previously recognized theory of antitrust liability.

At bottom, the Court concluded that Qualcomm is a monopolist and its prices are too high. Even if that is correct, those premises do not establish an antitrust violation. Nothing about Qualcomm's business practices has the effect of excluding competitors and undermining the competitive process in an industry that is vibrant—rapidly producing radically new innovations while consumer prices decline.

Indeed, antitrust law encourages firms like Qualcomm to strive to achieve market leadership that allows them to charge high prices. That prospect of outsized profits encourages innovation and competition. *See Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) ("The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system."). Not even the District Court doubted that Qualcomm achieved its market position by inventing

exceptional technology and developing the best products. In both respects, it out-competed its rivals. The free market worked exactly as it should.

The District Court faulted Qualcomm because allegedly its "unreasonably high royalty rates raise costs to OEMs." 6ER1349. But for the reasons just given, the Sherman Act does not forbid the use of monopoly power to charge supra-competitive prices. No less important, any harm to OEMs is irrelevant, because Qualcomm does not compete against OEMs. *See, e.g.*, *Intergraph Corp. v. Intel Corp.*, 195 F.3d 1346, 1353 (Fed. Cir. 1999) ("The prohibited conduct must be directed towards competitors and must be intended to injure competition.").

The FTC's trial theory fares no better. The FTC theorized that Qualcomm distorted the competitive process through a form of "rent shifting": collecting the monopoly profits on its chips through high patent license fees, then lowering the market price for chips, thereby (in turn) reducing the incentives for competitors to enter chip markets. The FTC maintained that this mechanism resulted in a "margin squeeze"—raising Qualcomm's rivals' *costs* through patent license fees to OEMs, while also reducing its rivals' *revenues* through lower chip prices. 8ER1789 ¶¶88-

93. Legally, that theory was squarely precluded by precedent. *See Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc.*, 555 U.S. 438, 450-51 (2009). In *linkLine*, AT&T allegedly both (1) used monopoly power to increase prices in a wholesale market for DSL infrastructure (akin to Qualcomm's allegedly elevated royalties for its patents), and (2) reduced its prices in the retail DSL market (akin to Qualcomm's allegedly reduced prices for chips). *Id.* at 442-43. AT&T's retail competitors complained that it was thereby "squeezing" their retail margins, just as the FTC claimed that Qualcomm was reducing the margins of its competitors. *Id.* The Supreme Court rejected that argument, holding that the wholesale and retail mechanisms in such an alleged squeeze must be assessed independently, and an antitrust claim fails unless there is a duty to deal on the cost side or predatory pricing on the revenue side. *Id.* at 449-51. Simply rebranding the squeeze as a "surcharge" does not change the substance of the claim; this Court has applied *linkLine* to bar a margin squeeze claim, "[h]owever labeled." *John Doe 1 v. Abbott Labs.*, 571 F.3d 930, 935 (9th Cir. 2009); *accord* 2ER278-279 (order granting stay).

But the District Court did not reach that question because it did not adopt the FTC's factual premise that Qualcomm squeezed rivals' margins

by lowering chip prices. The Court conspicuously did not refer anywhere in its decision to the FTC's economist. And the Court found that, in fact, Qualcomm charges "monopoly prices" for its chips. 6ER1364; *see also* 6ER1194-6ER1195 (CDMA chips); 6ER1206 ("premium" LTE chips).

The antitrust laws specifically encourage, not forbid, the aspects of Qualcomm's business model that the District Court deemed to be illegal. First and foremost, Qualcomm licenses its SEPs to OEMs in exchange for royalties. Licensing is at least presumptively pro-competitive. It distributes technology and encourages innovation through the prospect of higher profits. *See* U.S. Dep't of Justice & FTC, *Antitrust Guidelines for the Licensing of Intellectual Property* §§ 2.0, 2.3 (January 12, 2017).

The District Court faulted Qualcomm for structuring its licensing in the way that is more profitable and efficient—issuing exhaustive SEP licenses to OEMs rather than component manufacturers. 6ER1300; 6ER1359. But that is ordinary commercial behavior. Almost without exception, antitrust law does not force firms to deal with their rivals. Moreover Qualcomm's rivals are able to compete on the merits of their chips, and sell them without paying Qualcomm *anything*.

At bottom, the District Court's theory is an attempt to write around precedents rejecting similar antitrust claims. The District Court believed that Qualcomm uses its monopoly power in two chip markets to force OEMs to take patent licenses at unreasonable prices. 6ER1210-6ER1211. That allegation most closely resembles a "tying" claim, which the FTC never made—and for good reason. Qualcomm is perfectly entitled to require OEMs to take a patent license with respect to all their phones, whether or not the OEMs buy any Qualcomm chips. And there cannot be any tying violation here, because OEMs could only secure the license from Qualcomm itself, and competition with respect to such license therefore cannot be foreclosed; "when a purchaser is 'forced' to buy a product he would not have otherwise bought even from another seller in the tied product market, there can be no adverse impact on competition because no portion of the market which would otherwise have been available to other sellers has been foreclosed." *Jefferson Par. Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 16 (1984). And antitrust law also does not recognize a more generalized claim that Qualcomm unfairly "leveraged" its monopoly position. *See Alaska Airlines, Inc. v. United Airlines Inc.*, 948 F.2d 536, 546-47 (9th Cir. 1991).

Settled antitrust law also rejects the District Court's reliance on the fact that Qualcomm is supposedly charging excessive royalties on SEPs that are subject to FRAND obligations. 6ER1323. While the FTC elsewhere has argued that charging above-FRAND royalty rates is an antitrust violation, the D.C. Circuit expressly rejected that theory. *See Rambus Inc. v. FTC*, 522 F.3d 456, 464-66 (D.C. Cir. 2008) (reversing FTC order to compel licensing at "reasonable royalty rates" because elevated royalties "normally ha[ve] no particular tendency to exclude rivals and thus to diminish competition"); *see also Brantley v. NBC Universal, Inc.*, 675 F.3d 1192, 1202 (9th Cir. 2012) ("[A]llegations that an agreement has the effect of reducing consumers' choices or increasing prices to consumers does not sufficiently allege an injury to competition. Both effects are fully consistent with a free, competitive market.").

To the extent the District Court did address a reduction in the price of Qualcomm's chips, it believed that Qualcomm utilized discounts to secure market share. 6ER1210-6ER1211. But antitrust law encourages firms to reduce their prices, with the narrow exception of below-cost pric-

ing that is susceptible to ultimate recoupment through exclusion of competitors. *Brooke Grp. Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 222-23 (1993). The FTC never alleged predatory pricing.

Against this backdrop of settled law addressing all the basic economic tenets of the FTC's theory, the FTC has done nothing more than relabel its claim as "raising rivals' costs." But that does not change its nature, nor avoid the precedent rejecting it. Indeed, the District Court only barely applied even a thin veneer of antitrust law in its opinion. It found that Qualcomm had large shares of two specific modem chip markets as of 2016. 6ER1191-6ER1207. But from that point forward, the Court's opinion ignores the relevant markets altogether and fails to identify any harm to competition. It instead condemns Qualcomm's failure to exhaustively license its chip rivals, Qualcomm's OEM license rates, and Qualcomm's discounting agreements in *every* chip market. It relies principally on the fact that Qualcomm's rivals make less money than they otherwise would. The Court then entered an injunction that applies to every current and future market, everywhere in the world.

For the reasons that follow, this Court should reverse the District Court's attempt to create a new conception of federal antitrust law, which

was deeply flawed and will affect an industry that is ubiquitous in the global economy.

I. THE DISTRICT COURT ERRED IN HOLDING THAT QUALCOMM IS SUBJECT TO AN ANTITRUST DUTY TO DEAL WITH ITS CHIP RIVALS.

1. From the very first days of its licensing program, Qualcomm has always recovered the value of its technology by licensing its patents to OEMs. 3ER770:8-14; 3ER723:17-3ER724:18. Conversely, Qualcomm has never granted its rivals chip-level "exhaustive" licenses. 4ER817:13-15; 3ER586:12-15. Doing so would undermine Qualcomm's ability to license its entire portfolio to OEMs that purchase chips from those rivals, leading to less efficient and less profitable multi-level licensing. OEMs would assert that chip-level licenses exhausted some of Qualcomm's patent rights, leading to disputes about the scope and relative value of the supposedly exhausted and unexhausted patents and disagreements over who (OEM or chip company) should take a license to which patents, resulting in an inefficient and impractical multi-level licensing program. 3ER586:25-3ER588:21; 2ER421:10-2ER422:22; 2ER445.

Nonetheless, because Qualcomm enforces its SEPs at the OEM level, its chip rivals have access to Qualcomm's standardized technology

and have sold their chips in unimpeded competition with Qualcomm. 2ER428:5-16; 2ER445-2ER446. The precise mechanism by which rival chipmakers have had access to Qualcomm's SEPs has evolved. Early on, Qualcomm entered into non-exhaustive, royalty-bearing agreements with chipmakers that explicitly did not grant rights to the chipmaker's customers. 4ER817:1-12. Qualcomm ceased doing so well over a decade ago, in response to evolving court rulings addressing patent law's exhaustion doctrine, which indicated that any license inherently is exhaustive regardless of any contractual provision to the contrary. 4ER838:14-4ER841:14; 4ER854-4ER855; 4ER847:22-4ER848:22; 4ER852-4ER853; 7ER1485-7ER1486.

Now, Qualcomm's OEM-level licensing leaves its chip rivals in a more favorable position than ever. Qualcomm still licenses and enforces its patents at the device level (*i.e.*, the cellphones), 3ER597:14-3ER598:3; 3ER599:13-3ER600:20, while chipmakers make and sell chips that practice some of Qualcomm's SEPs without paying any royalties *at all*, 2ER428:5-16; 2ER445-2ER446.

2. On those undisputed facts, the District Court nonetheless held that antitrust law imposes on Qualcomm a "duty to deal" with competing

chipmakers, specifically requiring Qualcomm to grant them exhaustive licenses to its SEPs, 6ER1300-6ER1306; 6ER1395—something it has never done. Strikingly, the FTC itself alleged no such duty to deal in its complaint. 8ER1770. The FTC also offered no defense of the District Court's holding in its response to Qualcomm's request for a stay in this Court. 2ER290-2ER291. The Department of Justice's Antitrust Division reinforced at the stay stage that the District Court's duty to deal ruling "flouts" Supreme Court precedent in a manner that "threatens to chill procompetitive conduct." 2ER333-2ER334. As those filings make clear, the District Court's duty to deal holding is contrary to well-settled antitrust law.

The District Court principally relied on *Aspen Skiing Co. v Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985). 6ER1301-6ER1304. In that case, a monopolist (the owner of three ski resorts) not only (1) terminated a profitable course of dealing (a joint pass) with its smaller rival, *Aspen Skiing*, 472 U.S. at 599, but also (2) refused to do business with the rival at ordinary retail prices, *id.* at 593-94 n.14. The Supreme Court held that, under these circumstances, the monopolist's conduct violated the Sherman Act in part because it had no pro-competitive justification. *Id.* at

608-09. The monopolist was clearly playing an anti-competitive long game: sacrificing short-term profits in order to damage its rival and eventually reap greater profits through lessened competition. *Id.* at 610-11.

Subsequently, the Supreme Court admonished courts against expanding *Aspen Skiing*, which lies "at or near the outer boundary of §2 liability." *Trinko*, 540 U.S. at 408-09. The Court gave multiple reasons not to expand antitrust duties to deal. These rationales stem from the core principles that: the antitrust laws are meant to encourage competitors to compete, not cooperate; forced sharing of resources or products among competitors could lead to collusion; and antitrust courts are ill-equipped "to act as central planners, identifying the proper price, quantity, and other terms of dealing." *Id.* at 407-08. Most important, the Supreme Court recognized that compelled dealing or sharing among competitors—even of resources that render a monopolist "uniquely suited to serve [its] customers"—can interfere directly with the primary policy of the antitrust laws, which is to incentivize each individual competitor to invest in the kinds of innovations that create "[t]he opportunity to charge monopoly prices" in the first place. *Id.* at 407.

This Court has recognized "a very limited exception to that general rule" that antitrust law imposes no duty to deal, 2ER278, when two strict requirements are satisfied: (1) the defendant "unilateral[ly] terminat[ed] [] a voluntary and profitable course of dealing," *MetroNet Servs. Corp. v. Qwest Corp.*, 383 F.3d 1124, 1132 (9th Cir. 2004); and (2) the *only conceivable* rationale or purpose is to sacrifice short-term benefits in order to obtain higher profits in the long run from the exclusion of competition." *Aerotec Int'l, Inc. v. Honeywell Int'l, Inc.*, 836 F.3d 1171, 1184 (9th Cir. 2016) (quoting *MetroNet*, 383 F.3d at 1132); *accord Novell, Inc. v. Microsoft Corp.*, 743 F.3d 1064, 1075 (10th Cir. 2013) (Gorsuch, J.).

3. Neither element of the standard is satisfied here. *First*, Qualcomm did not change a relevant "course of dealing." The essential feature of the District Court's duty to deal holding is that Qualcomm must grant chip rivals *exhaustive* licenses. But Qualcomm has never done that: it has always protected its ability to recover the value of its technology by licensing OEMs, so it has never granted exhaustive licenses to its rivals. 4ER817:13; 3ER586:12-15. The early agreements on which the District Court relied, 6ER1293-6ER1294, 6ER1303-6ER1304, were all non-exhaustive. 4ER817:13-15; 3ER586:12-15. For that very reason, the FTC's

own position is that they were not "licenses" at all. *See* 7ER1721 ¶¶254-256.

Second, Qualcomm's purpose in changing its practices vis-à-vis its chip rivals was not to sacrifice short-term profits to exclude long-term competition. Instead, as the District Court itself acknowledged, 6ER1295-6ER1296, Qualcomm responded to a change in the law: courts held that licenses to sell a product are inherently exhaustive, and suggested that all licenses may be exhaustive. *See Quanta Computer, Inc. v. LG Elecs. Inc.*, 553 U.S. 617 (2008); *TransCore, LP v. Elec. Transaction Consultants Corp.*, 563 F.3d 1271, 1274-76 (Fed. Cir. 2009). So, Qualcomm stopped entering licenses of any kind with chipmakers. 7ER1480-7ER1484. Instead, Qualcomm chose to continue its practice of licensing OEMs, and to enforce its patents at the device level. *See, e.g.*, 6ER1295-6ER1296 (citing testimony that Qualcomm stopped licensing chipmakers because, under modern exhaustion law, it "had to choose between licensing rivals and OEMs, and licensing OEMs is far more lucrative").

The District Court reasoned that Qualcomm's actions were anti-competitive in part because it stopped profiting on licensing fees from

rivals. 6ER1306. But it is undisputed that Qualcomm changed its practice in order to *optimize* the short-term profits from its licensing business, not sacrifice them, 6ER1294, 2ER362:1-6; it only forwent the relatively small chip-level royalties because of concerns that it *could no longer* grant licenses on a non-exhaustive basis, and thus could not collect these royalties without losing *more* royalties from its primary, OEM licenses, 7ER1520:22-7ER1521:17.

Thus, in changing its practices, Qualcomm chose an available option that was both (1) more profitable to its licensing business, and also (2) more favorable to its chip rivals (which no longer pay royalties as they once did pursuant to non-exhaustive agreements). The District Court itself found that Qualcomm's chosen strategy in the face of *Quanta* was more—not less—profitable, both in the short and long term. *See Aerotec*, 836 F.3d at 1184 (requiring short-term profit sacrifice). Look no further than the section of the District Court's opinion entitled "**Qualcomm Now Refuses to License Rivals Because it is More Lucrative to License Only OEMs**." 6ER1294. Indeed, the precise phrase "more lucrative" appears in this regard fourteen times in the opinion, *see* 6ER1291-6ER1293; 6ER1294-6ER1296, 6ER1298-6ER1300; 6ER1359;

6ER1395, to say nothing of other, very similar formulations. *See, e.g.*, 6ER1296 (Qualcomm seeks to avoid exhaustion above OEM level "to make more money"), 6ER1285 (Qualcomm's strategy seeks to avoid "reduc[ing] QTL's licensing revenues"). In fact, the District Court's ruling turns the law on its head, requiring Qualcomm to *sacrifice* its short-term and long-term licensing revenue (which is overwhelmingly derived from OEMs), rather than maximize it.

Notably, the District Court did not just find that licensing at the OEM level was more profitable for Qualcomm; it found that it was more favorable *for all* major cellular SEP licensors. In yet another heading the District Court states, "**Other SEP Licensors Have Imitated Qualcomm's Practice Because it is Lucrative.**" 6ER1296. These other SEP holders are not alleged to have had monopoly power in any chip market. This is proof positive that Qualcomm's practice of not exhaustively licensing chip rivals has business rationales that did not involve short-term sacrifice to exclude competition in the long run.

4. The District Court also invoked Qualcomm's commitments to two SDOs, which the Court held require the company to license its SEPs exhaustively to rival chip manufacturers. 6ER1291-6ER1292. The District

Court's reading of those agreements is mistaken. *See infra* Part V. But in any event, the Court did not clearly explain how that supposed contractual violation amounts to a Sherman Act violation.[6] The FTC itself only glancingly mentioned the argument in its pre-trial submissions—also without explanation. *See* 7ER1722 ¶40; 7ER1695. Read most charitably, the Court suggested that Qualcomm's failure to license its rivals is anticompetitive because it helps sustain Qualcomm's OEM royalties, which in turn—through a multi-step mechanism—supposedly deprive Qualcomm's rivals of revenues they would use to innovate and compete. 6ER1359-6ER1365.

That theory is an insupportable attempt to evade the strict limitations recognized by this Court's precedents on the imposition of antitrust duties to deal. *See* Douglas H. Ginsburg et al., *Section 2 Mangled:* FTC v. Qualcomm *on the Duty To Deal, Price Squeezes, and Exclusive Dealing* 13 (Geo. Mason U. Econ. Res. Paper Series, Paper No. 19-21, 2019) ("The

[6] To the extent the District Court equated a contractual violation with an antitrust violation, it erred. *See Rick-Mik Enterprises, Inc. v. Equilon Enterprises LLC*, 532 F.3d 963, 975 (9th Cir. 2008) ("A complaint about such contractual obligations is not an antitrust matter."); *City of Vernon v. S. California Edison Co.*, 955 F.2d 1361, 1368 (9th Cir. 1992) ("It is certainly true that a claimed breach of contract by unreasonable conduct, standing alone, should not give rise to antitrust liability.").

district court expands *Aspen Skiing* well beyond the 'outer boundary' of Section 2 by applying it to all contracts previously negotiated by the defendant firm and by inferring the firm was willing to sacrifice profits even in the face of evidence the firm had changed its business model to *increase* current profits."). The District Court's conclusion that Qualcomm acted anti-competitively traces entirely to the supposed anti-competitive consequence of the fact that Qualcomm does not license its rivals. Whether Qualcomm complied with the SDO agreements adds nothing to the analysis.

As just explained, the Supreme Court and this Court have squarely held that no such duty exists unless the monopolist (1) abandons a prior profitable course of dealing (2) solely to damage its rivals. Neither element of the standard is satisfied with respect to the SDO agreements. Qualcomm has not changed how it has operated under those agreements. Moreover, Qualcomm structures its licensing agreements to maximize profitability, not to injure rivals. At bottom, the District Court's conclusion can only be understood as imposing a duty to deal to make Qualcomm's licensing less profitable.

Nor could the FTC argue that the strict limitations on the recognition of an antitrust duty to deal are inapplicable on the ground that Qualcomm's failure to license its rivals contributes to the supposed overall anti-competitive effect of the company's business practices. The Supreme Court considered and rejected that argument in *Pacific Bell Telephone Co. v. linkLine Communications, Inc.*, 555 U.S. 438 (2009). There, the plaintiff alleged that the defendant monopolist was raising its rivals' costs, thereby diminishing competition. *Id.* at 449. The Supreme Court held that the defendant's conduct towards its rivals was irrelevant as a matter of law in the absence of an antitrust duty to deal. *Id.* at 452.

5. Holding that Qualcomm must engage in exhaustive component-level licensing—on whatever basis—would also raise the precise "judicial administrability" concerns that have caused the courts to limit the recognition of any antitrust duty to deal. Such a duty would require "antitrust courts to act as central planners, identifying the proper price, quantity, and other terms of dealing—a role for which they are ill suited." *Trinko*, 540 U.S. at 408; *see also MetroNet Servs. Corp.*, 383 F.3d at 1133. An antitrust duty to license exhaustively at the component level would im-

pose a multi-level licensing regime that would give rise to endless disputes about which entity (chipmaker or OEM) should be paying what proportion of the royalties on any given product at any given time. This would be different in kind from the role courts play now in determining reasonable FRAND rates to OEMs. This is the precise sort of undertaking that courts must avoid. That is all the more true where, as here, the entire theory of antitrust liability is unprecedented. And it is even more true given that Qualcomm has merely exercised the lawful right conferred on it by the patent laws to decide whether, and on what terms, to license its own patents.[7]

The District Court's answer was that it "will not need to set the terms of dealing in a new market" because "there is an existing market for modem chip SEP licenses." 6ER1306. Whether there is a "market"—in the sense of *demand*—is not the relevant question. It is whether there is a "price" that has been determined by the market. *Trinko*, 540 U.S. at

[7] *See Image Tech. Servs., Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 1218 (9th Cir. 1997) ("'[W]hile exclusionary conduct can include a monopolist's unilateral refusal to license a [patent or] copyright,' or to sell its patented or copyrighted work, a monopolist's 'desire to exclude others from its [protected] work is a presumptively valid business justification for any immediate harm to consumers.'" (quoting *Data General v. Grumman Systems Support Corp.*, 36 F.3d 1147, 1187 (1st Cir. 1994))).

408. In fact, it is undisputed that there was never an "existing market" *price* for exhaustive chip-level licenses, which the major cellular SEP owners have never granted, and there is certainly no multi-level licensing market in which cellular SEP holders attempt to exhaustively license a patent portfolio at different levels of the value chain. 3ER751:15-19; 4ER847:22-4ER848:22; 2ER475:1-15; 2ER445; 2ER443; 2ER440-2ER441.

II. THE DISTRICT COURT'S "SURCHARGING" HOLDING IS LEGALLY ERRONEOUS FOR THREE INDEPENDENT REASONS.

In its "surcharging" ruling, the District Court relied on a six-step chain of causation to support its legal conclusions. Through that mechanism, Qualcomm's supposedly "unreasonable" OEM royalties allegedly undermine the ability of its chip rivals to finance R&D, which in turn purportedly reduces chip rivals' ability to develop products that can compete against Qualcomm. The District Court erred in three respects. Each is sufficient to overturn the ruling below; cumulatively, the errors leave no doubt that reversal is required and that Qualcomm cannot be subject to liability under the Sherman Act or any other provision of federal antitrust law. *First*, the Court did not find that Qualcomm's practices in fact

exclude its rivals from competing and thus harm the competitive process itself. *Second*, the Court impermissibly relied not on fact-finding, but on improper logical leaps that it characterized as "inferences." *Third*, the Court erred by not applying the proper legal standard for determining the "reasonableness" of Qualcomm's royalties.

A. The District Court Failed To Identify Any Harm to Competition.

"[T]o be condemned as exclusionary, a monopolist's act must have an 'anticompetitive effect.' That is [the challenged conduct] must harm the competitive *process* . . . [H]arm to one or more competitors will not suffice." *United States v. Microsoft*, 253 F.3d at 58; *Cascade Health Sols. v. PeaceHealth*, 515 F.3d 883, 902 (9th Cir. 2008).

Here, the District Court did not identify any means by which Qualcomm's licensing practices distort ordinary modem chip competition on the merits. Nor did it find that Qualcomm's accused practices—*as distinguished from competitive advantages* conferred by its superior products and technology—in fact caused any "harm" or "outcome" in the market. *See United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966). The Court instead held that Qualcomm's licensing practices were unlawful because

they make it possible for Qualcomm to charge "unreasonably high" royalties, which supposedly operate as an anti-competitive "surcharge" on Qualcomm's chip rivals. 6ER1349. But by "anti-competitive," the Court meant nothing more than that Qualcomm's licensing practices put its rivals at a financial disadvantage. The Court did not find that Qualcomm had engaged in exclusionary conduct that damaged the *competitive process* itself. That was legal error.

1. The District Court's "surcharging" ruling rests entirely on its conclusion that Qualcomm raised its rivals' costs. *See, e.g.*, 6ER1351 ("Qualcomm has raised its rivals' costs, and thereby raised the market price to its advantage.").[8] Preliminarily, that argument faces the obvious reality that Qualcomm does not impose any costs on its rivals, which—because Qualcomm enforces its patent rights at the OEM level—have access to Qualcomm's SEPs at no cost.

[8] *See also* 2ER286 ("Those inflated royalties raise Qualcomm's rivals' costs, hobbling competition."); 2ER297 ("The district court correctly found that Qualcomm's actions harmed competition by supporting Qualcomm's no license, no chips policy at the OEM level, raising its rivals' cost, and thereby maintaining its modem-chip monopoly.").

The District Court's response was to cite a hearsay discussion in an economics textbook[9] of an entirely different issue: the effect of government-imposed taxes. *Id*. The textbook notes only that the effect of a tax on output and price does not depend on whether the tax is placed on buyers or sellers. N. Gregory Mankiw, *Principles of Microeconomics* 156 (7th ed. 2014).

But that does not mean that the effect on *sellers' margins* (the "harm" that the Court purported to identify) is the same, regardless of who pays the tax. That depends on how the market responds to the tax. The same textbook makes that very point *in the very next sentence*. *See* Mankiw at 156 ("In the end, the elasticities of supply and demand determine how the tax burden is distributed between producers and consumers."). This point has also been recognized by the Supreme Court. *See Fulton Corp. v. Faulkner*, 516 U.S. 325, 341 (1996) ("The actual incidence of a tax may depend on elasticities of supply and demand, the ability of

[9] The textbook was not admitted into evidence and was not the subject of testimony. *Cf.* Fed. R. Evid. 803(18). To the extent the court relied on the textbook in making factual findings, those findings must be disregarded because a district court may not rely on facts outside the record. *See Clicks Billiards, Inc. v. Sixshooters, Inc.*, 251 F.3d 1252, 1267 (9th Cir. 2001).

producers and consumers to substitute one product for another, the structure of the relevant market, the timeframe over which the tax is imposed and evaluated, and so on.").

Take this illustration. If OEMs pay a $1 tax, the margins of upstream chipmakers are not affected—unless the OEMs can push down chip prices or reduce their demand. By contrast, if the chip suppliers themselves pay a $1 tax, their margins will be reduced by $1—absent their ability to "pass through" some of that tax to OEMs with higher chip prices. Accordingly, the Mankiw textbook does not provide the necessary link that royalties paid by OEMs are somehow equivalent to a cost borne by Qualcomm's rivals. *See also* Ginsburg, *supra* at 15 ("The FTC's attempt to rebrand a margin squeeze as a 'tax' does not alter the fundamental nature of the claim, nor should it be sufficient to evade *linkLine*'s holding that, absent a duty to deal and predatory pricing, 'a firm is certainly not required to price . . . in a manner that preserves its rivals' profit margins.'").

2. Forced to confront the fact that Qualcomm does not charge its rivals *anything*, the District Court articulated a complex, multi-step

mechanism to conclude that the OEM license fees function as a "surcharge" that, the Court believed, adds a cost only to Qualcomm's rivals' chips. 6ER1349-6ER1352. Those higher costs, the Court held, are anti-competitive because—and only because—if Qualcomm's rivals had more money, they supposedly would be better innovators and thereby would better compete. 6ER1361-6ER1365.

The District Court's theory—*i.e.*, merely raising rivals' costs, without more[10]—does not state a viable Sherman Act claim. "[R]aising rivals' costs theory 'is sometimes useful' but 'can never operate as a complete test for exclusionary conduct.'" *Novell*, 743 F.3d at 1079.

Raising rivals' costs alone is not enough because businesses take pro-competitive actions all the time that raise their rivals' costs. For example, a business that buys more of a scarce input will raise rivals' costs for that input. Or a business that advertises widely will raise rivals' costs by forcing them to advertise as well. More broadly, *successful competition* will deprive a rival of revenue that it could otherwise use to compete. The

[10] As stated above, the FTC alleged the combination of raising costs and reducing prices, resulting in a "squeeze." That theory fails under *linkLine*, 555 U.S. at 449-52.

District Court's theory inverts all those obviously lawful actions into violations of the Sherman Act.

Indeed, the antitrust laws would permit Qualcomm to impose the same (or greater) costs on those same chip companies *directly* through chip-level license fees, *see linkLine*, 555 U.S. at 439-51, if it chose to structure its licensing business that way. Nothing in law or logic suggests that Qualcomm acts unlawfully if its license agreements with OEMs had the same effect, only *indirectly*.

In fact, raising rivals' costs is not anti-competitive unless it distorts competition by imposing *disproportionate* costs on rivals. In the only case in this Circuit recognizing an antitrust claim for "raising rivals' costs," the Court held that plaintiffs stated a monopolization claim where a hospital allegedly "funnel[ed] indigent and low-paying patients to competitors." *Forsyth v. Humana, Inc.*, 114 F.3d 1467, 1478 (9th Cir. 1997). In that case, the hospital "increased the operating cost of those competitors by imposing on them the cost of caring for indigent patients," which the defendant hospital itself did not bear. *Id.* The key fact in *Forsyth* was that (unlike here) the defendant shifted onto its rivals costs that the defendant should have borne in the ordinary course of the competitive process.

The rival hospitals were disproportionately burdened with the cost of caring for indigent patients. *Forsyth*, 114 F.3d at 1478 (citing *Multistate Legal Studies, Inc. v. Harcourt Brace Jovanovich Legal & Prof'l Publications, Inc.*, 63 F.3d 1540, 1553 & n.12 (10th Cir. 1995) (if defendants' imposition of scheduling conflicts "disproportionately raise[d] [plaintiff's] costs," that "would qualify as anticompetitive conduct" unless defendants demonstrated a legitimate business justification)).

Here, it is dispositive that Qualcomm's license fees are non-discriminatory. The royalty that an OEM pays Qualcomm on a mobile phone does not depend on whether the chip in that phone was purchased from Qualcomm or from another supplier. 6ER1349; 2ER411:11-2ER412:6; 2ER413:9-17. Thus, even if the "surcharge" hypothesized by the District Court exists, there is no reason it would tip the competitive balance when an OEM decides which chip supplier to use. The OEM makes its decision on conventional metrics—such as quality, prices, and schedule.

3. The FTC has asserted that the supposed "surcharge" is unlawful on the ground that Qualcomm's license fees do "not raise Qualcomm's costs because Qualcomm collects the surcharge." 2ER295. But that complaint is wholly unrelated to competition among chipmakers for OEMs'

business. The chip companies compete vigorously on their merits, with no tilt in the playing field. Because Qualcomm's royalties do not change based on an OEM's choice of chip supplier, the royalties do not affect that choice.

The District Court rested its contrary ruling that Qualcomm's royalties are anti-competitive on *Premier Electrical Construction Co. v. National Electrical Contractors Association*, 814 F.2d 358 (7th Cir. 1987). 6ER1350. In that case, an association of electrical employers and a union established a fund to pay their bargaining costs. 814 F.2d at 359. The association's member employers paid 1% of their gross payroll into the fund. *Id.* Standing alone, however, the arrangement in *Premier* would have left non-association-members with lower costs, which would allow them to underbid association members for work. So the association and the union allegedly conspired to have the union impose the 1% fee on *non*-members through its collective bargaining agreements with them. The effect of the scheme was to deprive those non-members of the competitive advantage they had by not otherwise contributing. *Id.* at 359, 368.

This conduct, the District Court said, "demonstrate[d] how a monopolist can use an across-the-board price increase to impose artificial

constraints that disproportionately harm the monopolist's competitors." 6ER1350. But *Premier* does not support a rule that a facially non-discriminatory license fee violates the Sherman Act under the rule of reason. The key to the Seventh Circuit's holding was that this conspiracy amounted to unlawful price fixing. *Premier*, 814 F.2d at 376. That difference is critical. Many pricing actions that a monopolist can legitimately take unilaterally (most notably charging monopoly prices for its monopolized product) are considered anti-competitive when done by several competitors acting in concert. *See Am. Needle, Inc. v. Nat'l Football League*, 560 U.S. 183, 190-91 (2010) (holding that "[c]oncerted activity is . . . 'judged more sternly [under § 1] than unilateral activity under § 2' because "'[c]oncerted activity inherently is fraught with anticompetitive risk,'" and "a limit on such activity leaves untouched a vast amount of business conduct" (quoting *Copperweld Corp. v. Independence Tube Corp.*, 467 U.S. 752, 768 (1984))).

Further, the particular fee at issue in *Premier* was levied directly and only on non-members and was specifically designed to affect competition between members and non-members. While the members and the union voluntarily had entered into their own 1% fee agreement to pay for

their own collective bargaining, 814 F.2d at 359, the conspiracy-driven, union-imposed fee was not intended to defray the costs of bargaining for non-members. To the contrary, the non-members still had to pay their *own* bargaining costs in addition to being forced to pay the 1% union fee. *Id.*; *see also Nat'l Elec. Contractors Ass'n Inc. v. Nat'l Constructors Ass'n*, 678 F.2d 492, 495-97 (4th Cir. 1982). By contrast, Qualcomm did not conspire to set prices, its royalties do not target its rivals, and there is no "disproportionate" increase in Qualcomm's rivals' costs.

The District Court equally erred by relying on *Caldera, Inc. v. Microsoft Corp.*, 87 F. Supp. 2d 1244 (D. Utah 1999). *See* 6ER1351-6ER1352. In that case, Microsoft allegedly coerced computer manufacturers into paying software license fees for its MS-DOS operating system for every computer they sold, even if the computer used a different operating system. 87 F. Supp. 2d at 1249-50. This fee directly tipped the competitive balance, because a manufacturer choosing which operating system to include on its computers had a large incentive to choose MS-DOS over the competitor's operating system. Selecting the competitor's operating system would require the manufacturer to pay twice—the MS-DOS fee plus the separate fee for the alternative operating system. The district court

characterized that claim as "result[ing] in an agreement with the practical effect of exclusivity." *Caldera*, 87 F. Supp. 2d at 1250.

Again, this case is very different. Qualcomm does not discriminate; it does not charge higher royalties if the OEM uses a rival's chip. 6ER1349-6ER1350; 2ER411:11-2ER413:6, 2ER413:9-17. The OEM does not pay twice for the same product; the OEM does not also pay for Qualcomm's chips when it buys the rival's chip. No OEM testified as such. Nor is there any evidence that Qualcomm's patent licenses impose on the chip market "the practical effect of exclusivity." And, in *Caldera*, the Court found that the suspect conduct directly excluded competitors from the market through forced exclusive dealing of a product that was not otherwise necessary for the OEM to purchase. *Caldera*, 87 F. Supp. 2d at 1250-51. Here, the District Court found that the conduct indirectly raised rivals' costs, not through the monopolized product itself, but through an independent product (SEPs) that both the District Court and the FTC recognized must be licensed by the OEM *in any event*. 6ER1171, 3ER668:17-18.

4. Finally, the District Court erred in suggesting that Qualcomm acted anti-competitively because it had a supposed anti-competitive "intent"—by which it meant merely that Qualcomm hoped that its practices would make it more money and its rivals less money. 6ER1374-6ER1381. As Judge Easterbrook has explained, antitrust law expects and *encourages* firms to operate in exactly that way:

> Firms 'intend' to do all the business they can, to crush their rivals if they can. . . . Almost all evidence bearing on 'intent' tends to show both greed-driven desire to succeed and glee at a rival's predicament . . . [B]ut drive to succeed lies at the core of a rivalrous economy. Firms need not like their competitors; they need not cheer them on to success; a desire to extinguish one's rivals is entirely consistent with, often is the motive behind, competition.

A.A. Poultry Farms, Inc. v. Rose Acre Farms, Inc., 881 F.2d 1396, 1401-02 (7th Cir. 1989); *see also Olympia Equip. Leasing Co. v. W. Union Telegraph Co.,*, 797 F.2d 370, 379-80 (7th Cir. 1986) (Posner, J.); *Barry Wright Corp. v. ITT Grinnell Corp.*, 724 F.2d 227, 232 (1st Cir. 1983) (Breyer, J.). It was error for the District Court to treat the mere presence of "a desire to extinguish one's rivals" as sufficient to create antitrust liability, because it "run[s] the risk of penalizing the motive forces of competition." *A.A. Poultry Farms*, 881 F.2d at 1402. The same is true here in the raising rivals' costs context; intent is no indicator that a substantial

effect on competition actually resulted. Thus, the District Court's failure to identify cognizable competitive harm, and in particular "harm to the competitive process," reflects reversible legal error.

B. The District Court Erroneously Relied on "Inference" Rather Than Fact-Finding.

In holding that Qualcomm's OEM royalties have an anti-competitive effect, the District Court resorted to its six-step chain of causation. But at each step, the Court relied only on assumptions and logical leaps rather than actual evidence to infer its ultimate conclusion that Qualcomm's conduct was anti-competitive. As Commissioner Ohlhausen wrote, the FTC brought this action based on "a possibility theorem," lacking any "robust evidence of exclusion and anticompetitive effects." Dissenting Statement of Commissioner Maureen K. Ohlhausen, *In the Matter of Qualcomm, Inc.*, No. 141-0199 (Jan. 17, 2017), *cited in* 2ER279 n.1 (order granting stay). That was legal error. It is settled that a Sherman Act plaintiff—including the Government—must prove that the defendant's conduct had anti-competitive effects. Inferring this essential element of the FTC's claim is not enough. By presuming at several points of its analysis that Qualcomm's conduct has anticompetitive effect, the District Court collapsed a critical distinction that separates a rule of reason

case such as this from the rare case condemning conduct that is *per se* illegal under the antitrust laws.

1. The District Court held that Qualcomm violated Section 2 of the Sherman Act by illegally maintaining monopolies in markets for two kinds of modem chips. This "monopoly maintenance" theory requires two separate and distinct showings about the monopolist's conduct: (1) that it had an "exclusionary" (*i.e.*, anti-competitive) effect, *see United States v. Microsoft*, 253 F.3d at 58 ("A firm violates §2 only when it acquires or maintains . . . a monopoly by engaging in exclusionary conduct . . .."); and in turn (2) that this "reprehensible behavior has *contributed significantly* to the . . . maintenance of the monopoly[,]" *id.* at 79.

Put more simply, the plaintiff must show both (1) that the monopolist engaged in conduct that had "a substantial anticompetitive effect," *Ohio v. Am. Express Co.*, 138 S. Ct. 2274, 2284 (2018), and also (2) that this exclusionary conduct *caused* the maintenance of the monopoly. For ease of reference, we call the former the "exclusionary effect" element and the latter the "causation" element. Where, as here, there is no direct evidence of anti-competitive effect in the form of "reduced output, increased prices, or decreased quality in the relevant market," *id.*, the plaintiff

must show market power plus harm to competition. *See id.* ("Indirect evidence would be proof of market power plus some evidence that the challenged restraint harms competition.").

Yet despite this clear direction from the Supreme Court, the District Court repeatedly held that it may "infer" that Qualcomm's conduct had exclusionary effects, rejecting Qualcomm's argument that the FTC must prove that Qualcomm's conduct actually caused significant competitive harm. 6ER1208-6ER1209. The Court thus read the D.C. Circuit's ruling in *United States v. Microsoft* as "holding the court may infer that conduct caused anticompetitive harm." 6ER1364-6ER1365; *see also id.* at 6ER1370-6ER1371 (same).

That was legal error. A court may not infer anti-competitive effects from the general character of the monopolist's acts, including the fact that its rivals may be harmed—by, for example, raising their costs. Instead, "the plaintiff, on whom the burden of course rests . . . must *demonstrate* that the monopolist's conduct indeed has the requisite anticompetitive effect." *United States v. Microsoft*, 253 F.3d at 59 (emphasis added). In *United States v. Microsoft* itself, the Court of Appeals carefully analyzed whether the defendant's conduct was "exclusionary, rather than

merely a form of vigorous competition," *id.* at 58, recognizing that the distinction between sharp competition and exclusionary conduct "can be difficult to discern," *id.*

Only after finding that Microsoft's conduct had an anti-competitive effect did the D.C. Circuit turn to the separate and distinct question of "causation." *See id.* at 78. As to that question (and only that question), the court held that it was appropriate in governmental enforcement actions to adopt an inference of causation—*viz.*, so long as the anti-competitive effect was of the sort that would materially help to maintain the monopoly, the Government did not need to prove facts showing that the monopoly would have dissipated without the challenged conduct. The court thus "recognize[d] the need for courts to infer 'causation' from the fact that a defendant has engaged in anticompetitive conduct that 'reasonably appear[s] capable of making a significant contribution to . . . maintaining monopoly power.'" *Id.* at 79. The D.C. Circuit adopted this relatively low hurdle for a specific reason: it would be impractical and unfair to force the Government "to reconstruct the hypothetical marketplace absent a defendant's anticompetitive conduct," so as to demonstrate that conduct with proven anti-competitive effects was the but-for

cause of the continued monopolization. *Id.* at 79. Thus, only after a court first establishes the exclusionary nature of the conduct—that there was harm to the competitive process—may the court infer that a monopoly was maintained as a result of the exclusion. In contrast, the District Court here skipped the prerequisite step of first determining anti-competitive harm. Its reliance on inferences in lieu of proof of the existence of anti-competitive harm was reversible error.

The Supreme Court later explained in *Trinko* why *United States v. Microsoft* was right to require the plaintiff to "demonstrate" that the challenged conduct "indeed has" an anti-competitive effect. After favorably quoting *United States v. Microsoft*'s admonition that it "can be difficult" to discern undesirable exclusionary conduct from desired competition on the merits, the Supreme Court noted that actual proof is still necessary specifically because "[m]istaken *inferences* and the resulting false condemnations 'are especially costly, because they chill the very conduct the antitrust laws are designed to protect.'" *Trinko*, 540 U.S. at 414 (emphasis added) (quoting *Matsushita Elec. Industrial Co. v. Zenith Radio Corp.*, 475 U.S. 574, 594 (1986)).

That observation is obviously correct. Even archetypal lawful competition on the merits will often directly harm competitors. For example, a monopolist can certainly "discipline or eliminate competition" from new entrants by keeping its prices low, but that does not make those low prices anti-competitive. *See Barry Wright Corp.*, 724 F.2d at 233-34 (explaining that applying Sherman Act against such "limit pricing" would "risk[] making of the antitrust laws a powerful force for price increases"). Likewise, a monopolist might "foreclose" new competitors from capturing share in high technology markets by vigorously innovating each year and thereby raising the R&D costs necessary to enter—and that, too, would not be anti-competitive conduct. *See Cal. Computer Prods. v. Int'l Bus. Machs. Corp.*, 613 F.2d 727, 744 (9th Cir. 1979) (monopolist "had the right to redesign its products to make them more attractive to buyers" by lowering price or improving performance).

These practices all clearly hurt competitors in the short run and yet are still fundamental to free-market competition on the merits. That is why the law requires the plaintiff to *demonstrate* actual harm to the competitive *process* when it comes to deciding whether conduct has anti-com-

petitive effects, and why it does not permit an inference of anti-competitive effect from the mere fact that the monopolist's conduct made its competitors temporarily worse off. *See, e.g.*, *Cascade Cabinet Co. v. W. Cabinet & Millwork, Inc.*, 710 F.2d 1366, 1373 (9th Cir. 1983) (holding that "economic injury to a competitor does not equal injury to competition"). "The successful competitor, having been urged to compete, must not be turned upon when he wins." *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 430 (2d Cir. 1945) (Hand, J.).

2. Because of this basic legal error, the District Court spent the largest part of its opinion cataloging how Qualcomm acts towards rivals and customers in ways those market actors do not prefer, and then deeming that conduct "anti-competitive" without *any* economic analysis of how the challenged practices compare or relate to valid competition *in chip markets*. *See* 6ER1210-6ER1290. Indeed, the District Court's opinion does not even mention the testimony of the FTC's economic expert, Prof. Shapiro. Perhaps this is because that expert neither attempted to study nor could explain any actual anti-competitive effects that Qualcomm's practices had in the relevant markets, and the FTC itself argued that it had no obligation to assess any of those effects. 3ER686:18-

3ER689:5 (expert testimony that studying "what happened to [rivals' levels of] R&D" would be "not informative" and "not relevant as far as I understand the question"); 3ER691:9-16 (testimony that he had not "quantified the effects of Qualcomm's business practices on any other chipmaker"); 3ER709:3-7 (testimony that he had not "provided a quantification" of the effect of Qualcomm's policies on any OEM's expenses or pricing); 2ER359:11-17 (testimony that he did "not provide[] a quantification" on the effect of Qualcomm's policies). That leaves a gaping, dispositive hole in the FTC's case.

The District Court impermissibly tried to fill that gap with intuition, assumptions and inferential leaps, rather than actual evidence, with respect to each of the six steps in its chain of causation—as follows:

Step 1. OEMs pay royalties to Qualcomm with respect to phones that contain chips sold by its rivals in the monopolized markets. The Court deemed some unstated portion of those royalties "unreasonable." *But see infra* Part II.C (detailing the errors in that finding). The Court did not doubt that Qualcomm may require that OEMs take licenses in order to sell cellphones that practice Qualcomm's patents, and specifically may charge royalties with respect to phones that use chips made by

Qualcomm's rivals. The Court did not attempt, however, to find the fact that was essential to its ultimate conclusion that Qualcomm's royalties improperly undermine its rivals' economic ability to invest in developing competitive products: the proportion or amount of the royalties that is a supra-competitive overcharge. The Court thus eschewed the need to assess whether the magnitude of the surcharge was enough to have any meaningful effect on competition.

Step 2. OEMs supposedly conceive of an "all in" price that treats some (undefined) "unreasonable" portion of Qualcomm's royalties as a "cost" of rivals' modem chips. 6ER1351. According to the Court, OEMs conceive of an "all in" price that attributes the supposedly "excessive" portion of Qualcomm's royalties (the "surcharge") to the price of rivals' modem chips. 6ER1351. The extent to which that is true is classically the kind of determination that must be made on the basis of economic evidence, not assumption, speculation, or anecdote. *See Fulton Corp.*, 516 U.S. at 341 (analysis to determine tax incidence "would require complex factual inquiries" concerning numerous factors (quoting *Commonwealth Edison Co. v. Montana*, 453 U.S. 609, 619 n.8 (1981))); *Concord Boat*

Corp. v. Brunswick Corp., 207 F.3d 1039, 1056-57 (8th Cir. 2000) (reversing antitrust judgment based on testimony that defendant's discounting program "imposed a tax" where expert did not properly model actual market conditions). Here the Court did not consider any such "complex factual inquiries."

In addition, the "all-in price" theory makes no economic sense, rendering the Court's reliance on this step invalid as a matter of antitrust law. *See United States v. Syufy Enters.*, 903 F.2d 659, 663 (9th Cir. 1990) (antitrust theories "must make economic sense"). OEMs negotiate separately for the cost of each component they purchase, and an increase in the cost of a license to Qualcomm's cellular SEPs has no necessary connection to the price of a modem chip. 2ER425:12-2ER427:3; 2ER412:7-16. OEMs buy dozens of components aside from modem chips to build their phones, and there is no reason to equate a royalty "surcharge" paid by OEMs with an increased cost imposed on just one supplier—the supplier of modem chips. Even if the "surcharge" could properly be considered to be a cost borne by component suppliers rather than by OEMs, its effects would be spread thinly across *all* suppliers, a fact that the District

Court had to—but did not—consider in determining whether any anti-competitive effect was substantial.

The District Court based its contrary ruling on a brief excerpt from the deposition of an employee of a single contract manufacturer (Wistron). 6ER1349-6ER1350. The witness described a single instance in which that one manufacturer supposedly chose a Qualcomm chip over a rival's chip because it had to pay royalties to Qualcomm regardless of which chip it used (which is undisputed), and using Qualcomm chips purportedly would allow it to "recoup" more quickly the up-front license fee it had paid to Qualcomm. *Id*. at 6ER1350.[11]

The Court never explained how this evidence supports its concept of an "all-in price" that attributes Qualcomm royalties only to the prices of competitors' chips. This one squib of deposition testimony does not even mention that Wistron considered an "all-in" price, much less establish an industry practice concerning how Qualcomm's royalties are

[11] Even on its own terms, that testimony makes no sense. The up-front fee was a sunk cost: it is undisputed that Qualcomm's up-front license fees (which the Court never found to be "unreasonably high") are *not* credited against chip purchases, so Wistron could not "recoup" that fee by using Qualcomm chips. 3ER560:14-3ER561:6.

viewed—a necessary finding here. Disconnected analysis and misplaced anecdotes are not proof of substantial anti-competitive effect.

Step 3. OEMs supposedly respond to this higher "all in" chip cost by either reducing their purchases of, or the prices they pay for, rivals' chips by some amount in the monopolized markets. 6ER1351. But the Court did not attempt to find the relevant fact by quantifying this effect, either proportionately or in absolute terms. The Court did not assess, for example, the extent to which OEMs have the buying power to drive down chip prices. Nor did it assess demand.

In any event, the District Court's own characterization of the facts is flatly contradictory. The Court found—also without any evidence—that OEMs pass the costs on to consumers (raising consumer costs) or that they are absorbed by competing chipmakers (limiting innovation). 6ER1349, 6ER1364. That was the basis for the Court's conclusion that Qualcomm's royalties harm consumers. But the surcharge cannot both raise consumer costs and be absorbed solely by chipmakers, so as to cause them substantial anti-competitive harm.

Step 4. With some (indeterminate) amount of lesser income from the monopolized markets, rivals' margins are supposedly reduced by

some amount. 6ER1359-6ER1360. The Court did not attempt to find as a matter of fact the extent of the effect that those lower sales or lower prices would have on chip rivals' income. It did not assess, for example, the profit margins of chipmakers, their ability to undercut Qualcomm's chip prices, or the extent to which those profits are driven by sales in the monopolized markets. The Court thus made no finding regarding either the extent to which Qualcomm's margins were excessive or the extent to which the change in OEM behavior would reduce competing chipmakers' margins—by 5%, 50%, or 95%. Whether Qualcomm's royalties to OEMs actually had a substantial impact on its rivals' chip prices and margins is an empirical proposition, *see Fulton Corp.*, 516 U.S. at 341, yet the District Court made no finding—and the FTC offered no evidence—to support this critical link to harm in the "surcharge" theory.

Step 5. With lesser margins of some undetermined amount, rivals' research and development investments are in turn supposedly reduced by some amount. 6ER1362. The Court relied not on evidence about rivals' actual R&D programs, but instead the abstract proposition that if a company has more money, it can choose to invest more in innovation. *Id.* The Court did not attempt to identify to what extent rivals' R&D budgets are

fixed or instead vary based on variations in income—for example, because the rivals' profit margins are thin or because they prioritize R&D over other uses of revenue. The Court also did not consider the extent to which those budgets are dependent on revenues from sales in the monopolized markets—as opposed to other cellular markets or different lines of business—or whether any increased R&D spend would be used for technologies other than cellular.[12]

Step 6. With less research and development of some unspecified degree, rivals' ability to compete in the monopolized markets is supposedly reduced by some undetermined amount. 6ER1364. The Court did not assess the extent to which component makers' ability to compete was limited by their R&D budgets, as opposed to other factors, such as the inability to execute on complicated business plans, misplaced priorities, and the like.

[12] The only evidence the Court cited was an internal Qualcomm slide from 2009 suggesting that the company should develop a strategy to compete with MediaTek on 2G GSM chips (a non-relevant market), "destroy MTK's 2G margin and profit" and "[t]ake away the $$$ that MTK can invest in 3G." 6ER1362. That kind of "desire to extinguish one's rivals" is a normal part of competition and does not create antitrust liability. *A.A. Poultry Farms*, 881 F.2d at 1402.

Qualcomm introduced significant evidence to the contrary. For example, even with massive budgets, Qualcomm's rivals had proven themselves unable to bring innovative products to market. Intel and its consultants, Bain, concluded that even though Intel's R&D investment relating to cellular products was comparable to Qualcomm's, Qualcomm's R&D was two to three times more productive. 3ER756:22-3ER757:18; 3ER758:17-25; 7ER1573, 7ER1574; 2ER381:25-2ER382:9; 2ER385:13-17; 6ER1435, 6ER1440; 6ER1428. Likewise, an ST-Ericsson manager testified that "resources available was not a major issue," investing further resources would have been counter-productive, and the company's failures were due to "lack of processes, organizational structure, the management team, the decision-making." 3ER651; *see also* 3ER625:15-25 (Apple concluded ST-Ericsson "could neither execute nor manage their way out of a paper bag"). Without proof that the competitive outcome would have been different in a world without the anti-competitive conduct, no antitrust claim may lie. *See Rambus*, 522 F.3d at 466-467.

Finally, the District Court never grappled with the fact that the "surcharge" theory proves too much because it would render *any* Qualcomm royalty anti-competitive. Under the FTC's theory, it is not just the

"surcharge" that lowers rivals' margins but, as the FTC conceded at trial, "it is true that even a reasonable royalty gives Qualcomm *a cost advantage* over its rivals." 2ER371:8-9 (emphasis added); *see also* 2ER414:9-22. An inherent cost advantage can easily explain "the fragile state of Qualcomm's rivals, the exits of several other rivals, and Qualcomm's continued dominance." 6ER1373-6ER1374. That concession—which was unavoidable—renders any "inference" of anti-competitive effects (as opposed to a legitimate competitive win by Qualcomm) inherently flawed.

In sum, there are numerous unfounded assumptions and inferential leaps in the District Court's view that the "surcharge" that Qualcomm supposedly charges to OEMs causes substantial anti-competitive effects in the markets for CDMA and "premium" LTE modem chips. The District Court found Qualcomm liable on this speculative, unproven basis because the Court applied the wrong legal standard, and substituted pure "inference" for proof. The FTC's failure to actually prove that this mechanism results in harm to competition in the relevant modem chip markets requires reversal.

C. The District Court Erred In Holding That Qualcomm's OEM Royalties Are "Unreasonable."

The first step in the District Court's chain of causation—that Qualcomm's royalties are "unreasonable"—rests on distinct legal errors that require reversal, regardless of the validity of the Court's findings on other aspects of the "surcharge" holding.

1. The governing body of law arises under 35 U.S.C. § 284, which provides for a "reasonable royalty" as compensation for patent infringement. This Court has specifically applied Section 284 in a non-patent case to determine the reasonableness of an offer to license FRAND-committed patents. *See Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1040 (9th Cir. 2015) (*Microsoft III*) ("[T]his is not a patent law action. Still, the Federal Circuit's patent law methodology can serve as guidance in contract cases on questions of patent valuation."). That law applies equally here, where the District Court purported to determine whether Qualcomm's royalties reasonably reflected the "value of its patents." 6ER1323; *see also*, *e.g.*, *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1325 (Fed. Cir. 2014) (Section 284 standards are used to "estimat[e] the value of a patent"). Indeed, the FTC itself advocated for the outcome of patent in-

fringement litigation as the benchmark in assessing Qualcomm's royalties. 7ER1718-7ER1719 ¶¶182, 186; 2ER369:8-2ER370:13 (closing argument).

2. The District Court's first, and dispositive, error was its refusal to apply the "best measure" of a reasonable royalty: Qualcomm's previously established royalty for the same portfolio.[13] The Court never clearly explained its failure to do so. Even if Qualcomm's alleged market power in chips could potentially affect royalties paid by OEMs that purchased those chips, the Court erred as a matter of law in rejecting the established royalties received by Qualcomm when it was *not* alleged to have market power, and from OEMs that were *not* subject to that alleged power (*e.g.*, because they did not buy any chips from Qualcomm).

Specifically, the District Court found that Qualcomm had monopoly power in CDMA chips beginning in 2006 and "premium LTE" chips beginning in 2011. 6ER1191; 6ER1199-6ER1200, 6ER1200-6ER1207. Yet the Court itself found that for 30 years Qualcomm has charged OEMs the

[13] *See, e.g.*, *Faulkner v. Gibbs*, 199 F.2d 635, 638 (9th Cir. 1952) (an "established royalty" is "the best measure" of value); *accord Monsanto Co. v. McFarling*, 488 F.3d 973, 978-79 (Fed. Cir. 2007); *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

same 5% nominal royalty rate. 6ER1339. Unquestionably, there is "no economic[ally] meaningful difference" between the royalty rates that Qualcomm received from OEMs for its patent portfolio before and during the alleged period of monopoly power. 2ER388:3-2ER392:15; 2ER395:13-2ER398:6; *see also* 6ER1418; 6ER1422. Rather, those nominal royalty rates for full portfolio licenses have generally remained constant—and the rates for SEP-only licenses and per-unit caps on royalties have declined. *See id*. Further, OEMs paid the same royalties to Qualcomm whether or not they had a near-term need to purchase modem chips from Qualcomm, demonstrating that those royalties were not the result of Qualcomm supposedly leveraging its monopoly power in the relevant chip markets, as the FTC alleged. *See* 2ER403:4-2ER406:14; 2ER408:5-23. There were hundreds of licensing agreements with OEMs that were entered into at times when the FTC did not allege that Qualcomm had market power, or with OEMs that had no need for the kinds of chips that Qualcomm purportedly monopolized. *Nickson Indus., Inc. v. Rol Mfg. Co.*, 847 F.2d 795, 798 (Fed. Cir. 1988) (affirming damages award of 8.8% of 41% of the gross sales price because it was the rate "paid by Nickson's established licensees").

The District Court rejected those established rates based on its conclusion that Qualcomm's royalty rates should have declined because its "share of SEPs is declining" and Qualcomm's patents expire over time. 6ER1323; 6ER1339-6ER1341. That was error for three separate reasons.

First, Qualcomm's proportionate "share" of SEPs is not the relevant measure. The question is whether Qualcomm's royalties have remained reasonably commensurate with the value of its own licensed portfolio. The FTC offered no evidence that the value of Qualcomm's patent portfolio is declining. It is undisputed that Qualcomm's licensed patent portfolio has *grown*, not diminished, because new patents covering more technology areas are added faster than old ones expire. Indeed, Qualcomm has added *successive* generations of SEPs through 3G, 4G, and now 5G *at no extra cost*. The portfolio exhibits approximately 30% compound annual growth, on net growing an average of *35 new patents per day*—including patents fundamental to both newer generations of cellular communication and key improvements (*e.g.*, 3G, High Speed Packet Access (HSPA), 4G LTE, and 4G LTE Advanced). *See* 3ER631:17-3ER633:2, 2ER451:6-2ER452:8, 2ER452:23-2ER454:4; 3ER652. With each new license entered into before any periods of alleged chip dominance, licensees

valued these newly-issued patents at least as much as the older patents by agreeing to the same royalty rates. Each new license thus re-affirmed the value of Qualcomm's ever-growing portfolio at that time.

Second, the District Court erred in limiting its analysis to cellular SEPs, despite acknowledging that Qualcomm's licenses generally include both "non-cellular SEPs" and "Non-SEPs." 6ER1172. By holding that Qualcomm's portfolio rates necessarily should have declined with its relative share of cellular SEPs, the Court ignored the numerous other valuable innovations contained in Qualcomm's full portfolio that is subject to the 5% rate. Specifically, the portfolio also includes valuable SEPs in non-cellular technologies and tens of thousands of Non-SEPs, which are not essential to any standard, but are nevertheless practiced by modern mobile devices. *See* 3ER629:9-3ER631:13, 3ER639:2-3ER645:3. These cover a broad range of other technologies, including artificial intelligence, user interface, augmented and virtual reality, video compression, battery charging, and improved battery life. 3ER630:16-22; 3ER640:6-

3ER645:22.[14] The District Court was correct that those non-cellular patents have value, 6ER1172, but erred in ignoring that value to Qualcomm's licensees and in ignoring that those patents are not subject to FRAND.

Third, Qualcomm's royalties have in fact declined as a proportion of the price of a cellphone. As the District Court itself found, "Qualcomm has capped the maximum royalty base" against which that royalty is charged "at $400." 6ER1173-6ER1174. Moreover, the District Court found that in 2016 all "premium" LTE phones sold for more than $400, which would be subject to the royalty caps. *Id.* at 6ER1201-6ER1202. In addition, as part of a resolution of the regulatory action in China, in 2015 Qualcomm reduced its rate for SEP-only 3G and 4G licenses to 3.25%, and later carried that rate forward to the worldwide market and included patents relevant to 5G without raising the rate for the additional patent

[14] The District Court suggested Qualcomm was at fault for failing to quantify the additional value of its Non-SEPs, 6ER1333-6ER1334, but it was the FTC's burden to prove its theory based upon Qualcomm's purportedly excessive SEP royalties. *See ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 872 (Fed. Cir. 2010) ("As a matter of simple procedure, [the defendant] had no obligation to rebut until [the plaintiff] met its burden with reliable and sufficient evidence.").

coverage. 2ER428:17-2ER429:7; 2ER430:10-2ER431:6. Charging lower royalty rates cannot be an illegitimate exercise of market power.

3. Even if it were appropriate to disregard the best measure of reasonableness—Qualcomm's own licenses to its own patent portfolio entered into in the absence of any alleged market power—the District Court still erred as a matter of law in its consideration of rates paid to other licensors for other patents, without any evidence that those licenses or patents were comparable to Qualcomm's.

In the absence of an established royalty, a "reasonable royalty" may be determined through a comprehensive analysis of existing licenses to comparable patents. *See, e.g.*, *Apple*, 757 F.3d at 1325-26; *Georgia-Pacific*, 318 F. Supp. at 1120-21; *Ericsson, Inc. v. D-Link Systems, Inc.*, 773 F.3d 1201, 1227-28 (Fed. Cir. 2014). Here, the District Court placed dispositive weight on the royalty rates received by a few other cellular SEP licensors. *See* 6ER1224; 6ER1239; 6ER1323; 6ER1332; 6ER1340-6ER1342. To have any bearing on the reasonableness of Qualcomm's royalties, other patents and licenses must be shown to be technologically and economically comparable to those at issue. *See*, *e.g.*, *Microsoft III*, 795 F.3d at 1043-44; *Ericsson*, 773 F.3d at 1227; *Commonwealth Scientific*

and Indus. Research Organisation v. Cisco Systems, Inc., 809 F.3d 1295, 1303-04 (Fed. Cir. 2015) ("*CSIRO*").

But the District Court did not even attempt to meet that standard, making its royalty analysis "inherently unreliable" and legally flawed. *Apple*, 757 F.3d at 1324-25. Indeed, the Court expressly rejected any reliance on the FTC's only proffered evidence on the issue: the testimony of Michael Lasinski, who "evaluated SEP holders' relative portfolio strength in part by counting SEP holders' approved contributions to standards." 6ER1348. The Court found that testimony flawed because of "the absence of any evidence that it corresponds to actual intellectual property rights, and its inability to account for transferred or expired patents." *Id.* (citation omitted).

But the District Court committed the same type of error it attributed to the FTC's expert. It looked to Qualcomm's relative number of standards contributions, "rapporteurships"—*i.e.*, secretarial reporting positions for standard-setting meetings[15]—and numbers of cellular SEPs

[15] *See* 2ER527; Merriam-Webster Online Dictionary, definition of "rapporteur" (https://www.merriam-webster.com/dictionary/rapporteur). The FTC presented no evidence of any relationship between relative "rap-

compared to other companies. 6ER1331-6ER1335. None of that evidence even purported to describe the value of a patent portfolio "comparable" to Qualcomm's vast licensed portfolio of tens of thousands of cellular SEPs and vast number of non-cellular SEPs and Non-SEPs. In *Microsoft III*, this Court affirmed a ruling that a license to a portfolio of SEPs and Non-SEPs was not comparable to an SEP-only portfolio because "it would be impracticable to isolate, or apportion the value" of only the SEPs. 795 F.3d at 1044. That rationale applies with equal force here. The District Court made no effort to—and could not given the FTC's failure of proof—separately quantify the value of Qualcomm's SEPs, let alone the additional value provided by the majority of Qualcomm's portfolio that consists of other patents covering a wide range of technologies, beyond cellular SEPs, practiced by licensed devices. 3ER630:5-15. Indeed, the FTC introduced no third-party patents or licenses into evidence *at all*. It did not examine claims of the alleged comparable patents. It did not identify the technical areas where other SEP licensors owned patents, or compare

---

porteurships" and patent value, nor could it have. *See* 2ER472:7-18 (author of rapporteurship presentation relied on by District Court acknowledged he is not an expert in patent valuation and "[doesn't] know how Qualcomm's cellular standard essential patent portfolio compares to anyone else's").

the value or quality of those patents to the value or quality of Qualcomm's patents. The Court did not compare the financial terms of actual licenses, the nature and scope of the license grants, the nature and scope of products licensed or other pertinent economic details.[16]

There was no testimony that others hold *fundamental* patents, let alone in multiple technology areas or multiple generations of cellular standards, like Qualcomm. 2ER449:14-2ER450:1. It is undisputed that Qualcomm has fundamental SEPs covering technology used every time a mobile device transmits anything, 2ER456:21-2ER457:2; 2ER459:18-2ER460:16, and on technology of ever increasing importance, 2ER463:21-

[16] The same flaws affect the Court's cursory reliance on the "Avanci" licensing platform for automobiles and smart utility meters. *See* 6ER1334-6ER1335. Avanci does not license cellphones, 3ER616:8-10, which are the focus of Qualcomm's at-issue licenses. It includes only certain of Qualcomm's cellular SEPs, 6ER1334; 3ER615:16-21; 3ER619:16-18, and does not include non-cellular SEPs or Non-SEPs (which are substantial in number and value). Qualcomm's participation in Avanci was an opportunity to "experiment" with joint licensing of 3G and 4G SEPs in a limited market, and did not reflect Qualcomm's view of the relative strength of its portfolio. 3ER616:18-3ER617:5, 6ER1446:10-22, 6ER1447:16-6ER1448:24. This experimental licensing platform for a fraction of Qualcomm's patents covering different products used in different markets has no evidentiary value in determining the reasonableness of Qualcomm's royalties for its vastly broader worldwide cellphone patent portfolio.

2ER465:16, but the record contains no evidence about other licensors' patents or whether they are comparable. Similarly, the FTC presented no evidence that other SEP owners hold patents on revolutionary technologies as Qualcomm does. *See* 3ER536:12-3ER537:15 (CDMA); 3ER537:16-3ER539:5 (data-optimized system); 3ER733:9-3ER736:6 (carrier aggregation).[17]

Moreover, the District Court's methodology was hopelessly flawed because Qualcomm's relative share of SEPs says nothing about the licensed patents' *value*. As even the FTC's witnesses agreed, "not all patents are created equal," and "a single patent can dominate an entire industry." 3ER748:2-16. In sophisticated licensing transactions, fundamental patents can provide immense value, and the undisputed evidence shows that Qualcomm's intense innovation leads the industry through every generation of cellular technology, from 3G to 4G and now 5G, and

[17] *See also Wi-Lan Inc. v. Research in Motion Corp.*, 2010 U.S. Dist. LEXIS 77776, at *13-14 (S.D. Cal. July 28, 2010) (Qualcomm's portfolio licenses are irrelevant to establishing reasonable royalty for different cellular patent, because "[t]here was no evidence that the numerous, global patents included in the Qualcomm licenses are analogous or comparable inventions to the . . . patent at issue. . . . Nor was there a showing that the scope of [the Qualcomm] licenses . . . and the products and services covered by these agreements, are comparable or analogous to the scope of the devices" at issue).

that Qualcomm's growing portfolio continues to have seminal patents to each of these generations of standards, 2ER451:6-2ER452:8, 2ER468:17-2ER649:10; no such evidence was submitted about any other portfolio. Comparability is neither present, nor was shown. Accordingly, the Court's conclusion that Qualcomm's royalty rates are unreasonable, founded primarily on non-Qualcomm licenses to non-Qualcomm patents, must be reversed.

4. The District Court also erred by holding that Qualcomm acted anti-competitively by basing its royalties on a percentage of the price of the entire cellphone (with a cap), rather than the price of a modem chip. 6ER1338-6ER1339. The Court reasoned that royalty rate determinations must begin by defining the royalty base as the "smallest salable patent-practicing unit" (SSPPU). But the Federal Circuit has rejected that proposition as "untenable." *CSIRO*, 809 F.3d at 1303. Instead, the entire product may be used as a royalty base if doing so "is consistent with the realities of a hypothetical negotiation and accurately reflects the real-world bargaining that occurs, particularly in licensing." *Exmark Mfg. Co. v. Briggs & Stratton Power Prod. Grp., LLC*, 879 F.3d 1332, 1349 (Fed. Cir.

2018); *see also Ericsson*, 773 F.3d at 1226 ("As the testimony at trial established, licenses are generally negotiated [based on the selling price of the product] . . ."). "[S]ophisticated parties routinely enter into license agreements that base the value of the patented inventions as a percentage of the commercial products' sales price." *Exmark*, 879 F.3d at 1349 (citation omitted).

The universal industry practice is to use the entire cellphone as the royalty base. *See HTC Corp. v. Telefonaktiebolaget LM Ericsson*, 2019 WL 126980, at *5 (E.D. Tex. Jan. 7, 2019); *see also* 6ER1342 (noting that Nokia charges royalties "per handset"); 3ER586:18-19 ("common industry practice is to license at the device level"); 3ER590:1-2 ("everybody" grants device-level licenses). ETSI, the leading cellular SDO, explicitly refused to adopt a rule that would foreclose use of the cellphone as the royalty base for SEPs declared essential to cellular standards. *See* 2ER479:4-2ER481:8. And other licensors receive royalties for their SEPs based on the entire cellphone. *See, e.g.*, 6ER1412-6ER1413; 7ER1539-7ER1540.

The uncontradicted evidence shows that Qualcomm's patents—whether cellular SEPs, non-cellular SEPs, or Non-SEPs—extend *far* beyond the modem chip. *See supra* p. 11. In holding otherwise, the District Court cited its own decision in *GPNE v. Apple, Inc.*, 2014 WL 1494247, at *10 (N.D. Cal. Apr. 16, 2014), *aff'd*, 830 F.3d 1365 (Fed. Cir. 2016), for a blanket rule that "'the baseband processor'—the modem chip—'is the proper smallest salable patent-practicing unit'" for any cellular SEP. 6ER1338. But *GPNE* was a very different case: it involved only three patents, and the court in that case actually analyzed the scope of the relevant patent claims. *GPNE*, 2014 WL 1494247, at *12-13. Here, by contrast, the FTC did not even *attempt* to prove that the 140,000 cellular SEPs, non-cellular SEPs, and Non-SEPs included in Qualcomm's portfolio read only on modem chips and not the cellphone as a whole. The District Court's royalty base holding was therefore erroneous as a matter of law. *See Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1315 (Fed. Cir. 2011) (rejecting *per se* "rule of thumb" that "fails to tie a reasonable royalty base to the facts of the case at issue"); *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1332 (Fed. Cir. 2014) (discussing rejected "rule of

thumb" that "made too crude a generalization about a vastly more complicated world").[18]

D. The District Court Erred in Relying on So-Called Chip Threats.

The District Court placed great weight on one of the mechanisms that it believed Qualcomm used to maintain its "unreasonably high" royalty rates: that Qualcomm had in certain instances voiced what the Court characterized as "threats" to cease supplying chips to an OEM if that OEM did not take a license at Qualcomm's patent royalty rates. *See, e.g.*, 6ER1210-6ER1211; 6ER1377. According to the District Court, absent those threats, OEMs supposedly would have negotiated lower royalties under the shadow of potential or actual FRAND litigation and (through the Court's tortured theory of harm) Qualcomm's rivals would have had higher margins and produced more competitive products. 6ER1211.

---

[18] The District Court stated that Qualcomm recognized that its royalty rates are unreasonable in the context of considering whether to separate its licensing from it chip business. 6ER1323-6ER1327; 6ER1343-6ER1348. In the evidence cited by the District Court, Qualcomm estimated that, if separated, the licensing business could have more difficulty ensuring that current licensees comply with *existing* license agreements (*i.e.*, that they correctly report and pay royalties they had agreed to pay). 6ER1326. Nothing in the cited documents suggests that anyone at Qualcomm believed its royalties were "unreasonable".

As a threshold matter, it is worth noting that what the Court characterized as "threats" typically reflected ordinary and inevitable consequences of Qualcomm's practice of not selling chips to OEMs that did not hold a license to Qualcomm's SEPs. Necessarily, Qualcomm had to advise OEMs of that policy and how it operated. *See, e.g.*, 4ER820:7-22; 4ER823:13-23. OEMs, in turn, are fully aware of the expiration dates for their patent licenses and of their chip purchasing needs, and can plan accordingly, including by bringing a timely FRAND challenge to the terms of any proposed future license agreement. 2ER403:10-2ER404:11. Characterizing those ordinary features of commercial negotiations between sophisticated parties as "threats" does not convert them into violations of the Sherman Act.

But even if the District Court's characterization were correct, the supposed "threats" add nothing to the Court's "surcharge" theory, which fails for the reasons addressed above; nothing about the supposed "threats" to OEMs excludes competition in modem chip markets. Importantly, Qualcomm is not alleged to have threatened OEMs if they wished to switch chip suppliers. Instead, Qualcomm's only allegedly coercive act was to extract supposedly higher license prices. 6ER1210-

6ER1211. To the extent rival chipmakers had competitive products, they remained just as able to sell them as if the license prices had been "reasonable." Because there is no market for Qualcomm's patents from which competition could be excluded, there could be no basis for holding that "conditioning" the sale of chips on a patent license is itself illegal—*i.e.*, one cannot be found to unlawfully "tie" or "leverage" a monopoly where no competition exists anyway. *See supra* p. 41. As to chip sales to OEMs, the Sherman Act would not compel Qualcomm to sell chips to an OEM at all—because Qualcomm is not an essential facility and unquestionably has no antitrust "duty to deal" with OEMs. Thus, there is no "conditioning" here that would run afoul of the Sherman Act.

Moreover, even if Qualcomm's "threats" could be characterized as a mechanism to evade the FRAND process, that is not an antitrust violation. As discussed, the D.C. Circuit has flatly rejected the argument that even a SEP owner's deceptive attempt to avoid FRAND limits on license rates is anti-competitive. *Rambus*, 522 F.3d at 464-66. And in any event, the District Court simply assumed—without proof—that but for the supposed threats Qualcomm would have obtained lower licensing rates. The

FTC presented no evidence and the Court made no findings that the outcome of any license negotiations between Qualcomm and an OEM would have been different but for what the Court characterizes as Qualcomm's threats. This should dispose of the FTC's case. *Rambus*, 522 F.3d at 466-67 (FTC has the burden to prove "but for" outcome would have been different); *see also supra* Part II.B. In fact, the undisputed evidence showed that OEMs agreed to the very same rates whether or not they purchased Qualcomm chips and whether or not the license covered phones containing chips over which Qualcomm was alleged to have had market power. 2ER399:4-2ER400:13; 6ER1408. The record contains evidence of hundreds of Qualcomm licenses that could not be affected by "threats," yet provided for indistinguishable royalty rates. *See* 6ER1401-6ER1402; 2ER388:3-2ER392:15; 2ER395:13-2ER398:6; 6ER1418; 6ER1422.

At bottom, the District Court's theory is that Qualcomm engaged in "monopoly leveraging." The Court reasoned that Qualcomm used its power in one kind of market (chips) to gain advantage in another market (portfolio cellular licenses). But monopoly leveraging is not—without some other exclusionary conduct in the leveraged market—a valid antitrust theory. *Alaska Airlines*, 948 F.2d at 547 ("Even in the two-market

situation, a plaintiff cannot establish a violation of Section 2 without proving that the defendant used its monopoly power in one market to obtain, or attempt to attain, a monopoly in the downstream, or leveraged, market."). For these reasons, Qualcomm's policy of requiring a license before selling modem chips is not anti-competitive.

III. THE DISTRICT COURT ERRED IN HOLDING THAT QUALCOMM'S DISCOUNTING AGREEMENTS WITH OEMS ARE PROHIBITED EXCLUSIVE DEALING ARRANGEMENTS.

The District Court held that two agreements under which Qualcomm provided Apple with discounts for chip purchases—the Transition Agreement (TA) and First Amended Transition Agreement (FATA)—were *de facto* exclusive dealing arrangements prohibited by the Sherman Act. 6ER1308-6ER1319. The Court further held that separate discounting proposals and agreements between Qualcomm and other OEMs were unlawful because they reinforced the exclusionary effect of the Apple agreements. 6ER1319-6ER1321.

Both rulings depart radically from the FTC's case at trial. The FTC limited its exclusive dealing case to a single chip discounting agreement with Apple (the FATA). It argued that even this single agreement ex-

cluded but a single competitor (Intel) from selling modem chips for a limited number of iPads (and "perhaps" delayed Apple's selection of Intel chips for the iPhone by one year). 2ER364:23-2ER366:1; 3ER674:16-20, 3ER694:19-23, 3ER699:18-3ER700:2, 3ER702:25-3ER703:3. The FTC made no argument regarding any other competitor under the FATA, abandoned its reliance on the prior Apple agreement (the TA), and affirmatively *disclaimed* any suggestion that any other actual or proposed discounting agreement had any exclusionary effect. 3ER694:24-3ER695:5; 3ER698:4-3ER699:6.

The District Court's holding that multiple—actual and proposed—discounting agreements are prohibited exclusive dealing arrangements is insupportable as a matter of law for four separate reasons: (1) the agreements were not "exclusive dealing" arrangements; (2) the agreements fall within a *per se* safe harbor for above-cost pricing; (3) the agreements did not foreclose any competitor from a substantial share of the market; and (4) it was impermissible for the District Court to rely on the non-Apple agreements that the FTC disclaimed, without at least giving Qualcomm the opportunity to respond.

1. It is undisputed that none of the agreements condemned by the District Court—including the single one ultimately challenged by the FTC—was an *actual* exclusive dealing arrangement. "An exclusive dealing contract involves a commitment by a buyer to deal only with a particular seller." *W. Parcel Express v. United Parcel Serv. Am. Inc.*, 190 F.3d 974, 976 (9th Cir. 1999). The essential feature of exclusive dealing is that it "prevents the buyer from purchasing a given good from any other vendor." *Allied Orthopedic Appliances Inc. v. Tyco Health Care Grp. LP*, 592 F.3d 991, 996 (9th Cir. 2010).

Here, by contrast, Qualcomm entered into "volume discount contracts, not exclusive dealings contracts." *W. Parcel*, 190 F.3d at 976; *see also Allied Orthopedic*, 592 F.3d at 997. No agreement required exclusivity, either outright or even as a condition of Qualcomm supplying chips—which (if this had happened) could have restricted its rivals' entry. Instead, each agreement left the OEM counterparty free to switch to any competing chip supplier without violating the contract. 3ER745:13-19; 3ER671:5-9. Indeed, Apple did just that during the term of the FATA, using Intel as an alternative chip supplier, turning down hundreds of millions of dollars in incentives. 3ER671:5-9. The District Court's theory

was that each discounting agreement was nonetheless *de facto* exclusive because it gave the OEM too great an economic incentive to purchase from Qualcomm. 6ER1308-6ER1309.

Because discounts lower prices, for such an agreement even to amount to exclusive dealing—much less be prohibited by the Sherman Act—"something more than the discount itself is necessary." *Allied Orthopedic*, 592 F.3d at 997. That is so because a discount itself does "not foreclose [an OEM] from competition because a competing manufacturer need only offer a better product or a better deal." *Id.*

With respect to the non-Apple agreements, the District Court did not even *attempt* to meet that standard. Each simply involved discounts that lowered prices. Each was accordingly lawful.

With respect to the Apple agreements, the District Court pointed to the fact that if Apple switched to a different supplier, it would have to repay some—but far from all—of certain payments Qualcomm had provided. 6ER1308-6ER1309. In support, the Court pointed to the testimony of an Apple witness that the discounts "made it very unattractive" or a "nonstarter" for Apple to choose a different chip supplier. 6ER1308-6ER1309. But no court has held that attractive discounts alone amount

to exclusive dealing. A competitor was free to offer a better product or lower price, and Apple was free to switch to that competitor. Eventually, Intel did just that and Apple eschewed the discounts to switch to Intel chips. 3ER671:5-9. Other chip suppliers could have challenged Qualcomm's position and supplied Apple. The fact that other competitors with offerings inferior to Qualcomm's could not win Apple's business is hardly indicative of exclusive dealing, as opposed to permissible volume or market-share discounts. *See W. Parcel*, 190 F.3d at 976 ("Because the contracts do not preclude consumers from using other delivery services, they are not exclusive dealings contracts that preclude competition in violation of the Sherman Antitrust Act."); *Allied Orthopedic*, 592 F.3d at 997 (holding that "something more than the discount itself is necessary to prove that [the] market-share discount agreements forced customers to purchase" only from the defendant).[19]

[19] In passing, the District Court pointed to the fact that the agreements terminated if "Apple . . . initiates any action or litigation against Qualcomm . . . for intellectual property infringement." 6ER1318. The Court believed this provision was anti-competitive because it supposedly prevented Apple "from engaging in litigation over Qualcomm's patents." 6ER1318. That reading is facially wrong: The provision applies only to litigation claiming that Qualcomm is infringing *Apple's* patents. 7ER1560.

2. Even if Qualcomm's discount agreements amount to exclusive dealing, they are still lawful under the Sherman Act because they did not involve below-cost pricing. When—as here—price is the clearly predominant mechanism of exclusion," the claim is akin to a predatory pricing claim and the discount is legal "so long as the [discounted] price is above-cost." *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 275 (3d Cir. 2012) (citing *Brooke Grp.*, 509 U.S. at 223); *Concord Boat*, 207 F.3d at 1062 (rejecting market-share discounts as *de facto* exclusive deals and finding that absent below-cost pricing, such discounts are *per se* legal).

This rule reflects the fact that discounts are highly *favored* by antitrust law. Discounts are a form of price competition, which is a principal aim of the antitrust laws. Discounts specifically are good for consumers; by definition, they lower prices. "[T]he price–cost test tells us that, so long as the price is above-cost, the procompetitive justifications for, and the benefits of, lowering prices far outweigh any potential anticompetitive effects." *Meritor*, 696 F.3d at 275 (citing *Brooke Grp.*, 509 U.S. at 223 and *Concord Boat*, 207 F.3d at 1062).

The District Court did not—and could not—find that any of Qualcomm's discounting agreements resulted in below-cost pricing. The Court

merely found that the agreements "lower the effective price of Qualcomm's modem chips[.]" 6ER1352. It was legal error to condemn the agreements as anti-competitive on that basis, because "[w]hen a firm . . . lowers prices but maintains them above predatory levels, the business lost by rivals cannot be viewed as an 'anticompetitive' consequence of the claimed violation. . . . [I]ndeed, 'cutting prices in order to increase business often is the very essence of competition.'" *Atl. Richfield Co. v. USA Petroleum Co.*, 495 U.S. 328, 337-38 (1990).

3. Even if a contract—here, the discounting agreements—amounts to exclusive dealing, that fact does not make it unlawful. Wholly apart from discounting, exclusive dealing itself is frequently pro-competitive. *See Allied Orthopedic*, 592 F.3d at 996-97 ("[T]here are 'well-recognized economic benefits to exclusive dealing arrangements[.]'" quoting *Omega Envtl., Inc. v. Gilbarco, Inc.*, 127 F.3d 1157, 1162 (9th Cir. 1997)); *Meritor*, 696 F.3d at 270; *E. Food Servs., Inc. v. Pontifical Catholic Univ. Servs. Ass'n, Inc.*, 357 F.3d 1, 8 (1st Cir. 2004) ("[I]t is widely recognized that in many circumstances [exclusive arrangements] may be highly efficient—to assure supply, price stability, outlets, investment, best efforts

or the like—and pose no competitive threat at all."). All contracts "foreclose or exclude alternative sellers from *some* portion of the market." *Tampa Elec. Co. v. Nashville Coal Co.*, 365 U.S. 320, 327 (1961).

Consequently, an exclusive dealing agreement is unlawful only if it "foreclose[s] competition in a substantial share of the line of commerce affected." *Tampa Elec.*, 365 U.S. at 327. As the District Court recognized, "[t]he 'substantial share' standard has typically 'been quantified as foreclosure of 40% to 50% of the relevant market.'" 6ER1310 (quoting *Feitelson v. Google Inc.*, 80 F. Supp. 3d 1019, 1030 (N.D. Cal. 2015)).

At trial, the FTC argued that only the FATA foreclosed a substantial amount of competition. 3ER698:4-24. It put on no proof with respect to the TA or any other discounting agreement. In turn, the District Court made no finding of foreclosure with respect to those other agreements—some of which were never even *entered into*—which are therefore necessarily lawful.

With respect to the FATA, the FTC contended that the agreement foreclosed Intel from supplying chips for a mere five iPad models released over three years and "perhaps" delayed Intel's ability to sell chips for the iPhone by one year. 3ER694:19-23; 3ER699:18-3ER700:2; 3ER674:4-23;

3ER702:25-3ER703:3. But the FTC did not present any evidence that the allegedly foreclosed opportunities amounted to—or even came close to—at least 40% of either alleged antitrust market. The five iPads were only about 5% of even Apple's volume, and therefore necessarily an even smaller percentage of the relevant "premium LTE" market generally. 2ER507:8-13.

The District Court nonetheless embraced dictum in *United States v. Microsoft Corp.*, 253 F.3d at 70, that it is not always necessary to reach the 40% threshold in Section 2 cases. 6ER1310. But this Court has never adopted such a rule. *See, e.g.*, *Feitelson*, 80 F. Supp. 3d at 1030 & n.8 (assuming at the pleading stage that the "40% to 50%" substantial share standard applies to both Section 1 and Section 2 claims). In any event, there is a wide chasm between asserting that 40% is not a fixed threshold and holding that it is unnecessary to come *remotely close*. "[I]n all cases the plaintiff must both define the relevant market and prove the degree of foreclosure . . . [b]ecause an exclusive deal affecting a small fraction of a market clearly cannot have the requisite harmful effect upon competition[.]" *United States v. Microsoft*, 253 F.3d at 69. In *United States v. Microsoft* itself, the agreements in question foreclosed 14 of the leading 15

Internet access providers, easily meeting the 40% to 50% threshold. *Id.* at 70-71.[20] The District Court's failure to find that a substantial share of commerce was foreclosed by the discounting agreements is fatal to its finding that Section 2 was violated. *See* Ginsburg, *supra*, at 3 (The District Court's "holding is in tension with modern antitrust precedent and economic theory, both of which make crystal clear that proof of substantial foreclosure is necessary to showing an anticompetitive effect from exclusive dealing.").

The District Court instead stressed the importance of Apple as an OEM customer. It reasoned that if other suppliers sold chips to Apple, they would have secured other business opportunities too. 6ER1313-6ER1314. Even assuming that is factually true, it is irrelevant to the relevant legal standard. The Court made no finding that supplying modem chips to Apple was a prerequisite for any chip supplier to remain a viable competitor in the relevant markets, nor could it plausibly reach that conclusion: Infineon was the exclusive supplier to Apple between 2007 and

[20] The District Court also cited *E.I. DuPont de Nemours & Co. v. Kolon Indus., Inc.*, 637 F.3d 435, 439 (4th Cir. 2011). *See* 6ER1314. But that case stands for the simple proposition that *at the pleading stage*, allegations of substantial foreclosure by an exclusivity deal are sufficient, without the need to identify market shares. *Kolon*, 637 F.3d at 439.

2011, yet this did not harm Qualcomm's viability at the time, 3ER741:23-3ER742:12; and Qualcomm was the exclusive supplier to Apple from 2011 to 2016, yet Samsung, HiSilicon, MediaTek and Intel all were or became viable competitors during that period without supplying Apple. 3ER677:21-24; 2ER493:19-2ER494:1.

There also was no basis for the District Court's suggestion that Qualcomm's agreements with other OEMs contributed to the supposed effects of the Apple agreements. 6ER1319-6ER1321. The two are wholly unrelated. The Apple agreements involved an entirely different product (so-called "thin modems" that only enable cellular connectivity and do not perform other functions) from the products in the other agreements (so-called "systems-on-a-chip" that fully integrate an applications processor and other features with the modem chip). 3ER542:13-3ER543:17, 3ER554:2-14, In turn, the only potential competitor for Apple's business, Intel, was not a potential competitor with respect to any other OEM (because Intel did not produce systems-on-a-chip, which were a requirement for the rest of the market). 3ER760:8-24.[21]

[21] The District Court incorrectly cited a Qualcomm email to the effect that under the TA "it is unlikely that there will be enough *standalone*

The "reinforcement" that the District Court imagined is impossible also for a second reason. The Apple agreements and the other discounting agreements cited by the District Court were operative at different times. The Apple agreements were effective from 2011 to 2016. 6ER1255; 6ER1262; 3ER763:6-7. Yet the District Court relied on Qualcomm's agreements with Samsung (in 2003), LGE (in 2004), and Samsung again (in 2018). 6ER1320.[22]

4. The District Court committed two further errors. It should not have relied in any respect on Qualcomm's discounting agreements with OEMs other than Apple. As discussed, the FTC affirmatively disclaimed

---

modem volume to sustain a viable competitor." 6ER1313. Standalone modems are "thin modems," 6ER1175-6ER1176, the overwhelming majority of which have been used by Apple for its iPhones. The email does not suggest that the TA would foreclose competition in the broader CDMA or premium-LTE markets, which also include systems-on-a-chip.

[22] Contrary to the District Court's statement that the 2018 Samsung agreement requires 100% exclusivity, 6ER1320, that agreement provides Samsung certain price discounts upon Samsung launching its flagship devices (commonly known as the Galaxy and Note mobile devices) using Qualcomm chips in only three geographies that amounted to around 40% of Samsung's flagship devices. 7ER1611-7ER1612. Despite ample evidence, the Court somehow failed to appreciate that Samsung makes its own cellular modem chips under the Exynos brand, using Qualcomm as a second source. 3ER789:1-6, 3ER789:21-3ER790:5; 2ER490:1-5.

any argument that those agreements amounted to exclusive dealing arrangements. 3ER694:19-3ER695:5 (Shapiro). Qualcomm thus was never given the opportunity to explain these other agreements or defend against the claim that they violate the Sherman Act. A district court "may not, without the consent of all persons affected, enter a judgment which goes beyond the claim asserted in the pleadings." *Crawford v. Gould*, 56 F.3d 1162, 1168 (9th Cir. 1995).

Further, the District Court's injunction did not define with any specificity what would constitute a forbidden "de facto" exclusive chip-sale agreement, and its findings suggest varying definitions, including incentive and rebate agreements of different sizes. 6ER1319-6ER1321. Accordingly, the injunction against "de facto exclusive dealing agreements" fails to provide adequate legal notice of what is prohibited, in violation of Fed. R. Civ. P. 65(d)(1), and should be vacated. *See Fortyune*, 364 F.3d at 1087; *Union Pac. R.R. Co. v. Mower*, 219 F.3d 1069, 1077 (9th Cir. 2000).

IV. THIS COURT SHOULD REVERSE OR VACATE THE DISTRICT COURT'S INJUNCTION.

The District Court entered a sweeping worldwide injunction applicable in every current and future market for modem chips. It rested that

decision on its findings that (1) Qualcomm held monopoly power in two narrow markets as of 2016, and (2) this power was likely to replicate itself in other (undefined) markets. 6ER1199-6ER1200; 6ER1207; 6ER1387. The Court did not analyze the equitable considerations that traditionally inform equitable relief. The Court erred in three separate respects.

1. Section 13(b) of the FTC Act provides for the issuance of a permanent injunction only when the defendant "is violating, or is about to violate," the antitrust laws. 15 U.S.C. § 53(b). Accordingly, "past wrongs are not enough for the grant of an injunction"; rather, injunctions may issue "only if" the FTC proves that "the wrongs are ongoing or likely to recur." *FTC v. Evans Prods. Co.*, 775 F.2d 1084, 1087 (9th Cir. 1985); *see also United States v. W.T. Grant Co.*, 345 U.S. 629, 633 (1953) ("[t]he purpose of an injunction is to prevent future violations" of law); *FTC v. Shire ViroPharma, Inc.*, 917 F.3d 147, 159 (3d Cir. 2019); *FTC v. AbbVie Inc.*, 329 F. Supp. 3d 98, 144-45 (E.D. Pa. 2018) (injunctions inappropriate if based solely on past violations of antitrust law), *appeal docketed*, No. 18-2758 (3d Cir. Aug. 13, 2018).

Further, while an injunction sought by the FTC may extend beyond enjoining illegal practices in the precise form in which they existed in the

past, s*ee FTC v. Grant Connect, LLC*, 763 F.3d 1094, 1105 (9th Cir. 2014), such "fencing-in" orders must bear a "reasonable relation to the unlawful practices found to exist," *id.*; *FTC v. John Beck Amazing Profits, LLC*, 888 F. Supp. 2d 1006, 1011-12 (C.D. Cal. 2012) (identifying both the tailoring and fencing-in principles), *aff'd*, 644 F. App'x 709 (9th Cir. 2016).

Here, the "violat[ion]" for Section 13(b) is Qualcomm's alleged anticompetitive maintenance of its *monopoly*. *See supra* p. 18-19. Thus, possession of *monopoly power* is an essential element of the alleged violation. But the District Court considered only the FTC's claim that Qualcomm had monopoly power through the end of 2016. 6ER1191; 6ER1200. The District Court did not find—and the FTC did not attempt to prove—that Qualcomm would *continue* to have monopoly power in any market. Indeed, the FTC's expert economist disclaimed any opinion on whether Qualcomm had monopoly power in any market after 2016. 3ER677:15-20.

The evidence in the record showed that Qualcomm's share of the two allegedly monopolized markets was falling precipitously through 2017. 3ER677:21-3ER678:24; 2ER376:9-12; 2ER493:6-2ER494:1. No market share data was introduced for early 2018. And the Court excluded

all evidence of actual market conditions after the March 2018 close of fact discovery—*i.e.*, for the entire nine-month period leading up to trial. 1ER239; 6ER1382; 6ER1387. Indeed, the Court even denied Qualcomm's request to proffer such evidence into the record so it would be available for this Court's review. 2ER514:22-2ER520:18; 1ER235.

With respect to "premium LTE," Qualcomm's market share was in a steep decline from 96% in 2014 to below 50% in 2017. 6ER1443; 2ER493:8-2ER494:1; 3ER677:21-3ER678:24; 2ER376:9-12. By 2018, of the three top "premium" cellphone OEMs—OEMs accounting for 90% of premium phones—Qualcomm sold no "premium" chips for new releases from two OEMs and supplied only 35% of the "premium" chip needs of the third. 3ER789:9-3ER791:7; 2ER489:15-2ER490:7. The precipitous decrease reflects that Qualcomm lawfully achieved an early lead through technological innovation, and then, as is natural in such circumstances, quickly lost market share as other competitors caught up. 3ER679:4-12, 3ER706:13-25; 2ER484:20-2ER485:18.

With respect to CDMA, Qualcomm's market share was falling in 2017. 3ER678:15-20. After ignoring and failing to develop CDMA chips for years, four major chipmakers obtained CDMA capability between

2014 and 2018—once CDMA capability became a requirement in China—and began taking market share from Qualcomm. 2ER494:15-2ER496:1, 2ER499:21-2ER501:3; 3ER678:15-20, 3ER683:11-21.

Ignoring the critical element of monopoly power, the District Court held that it was sufficient to justify a prospective injunction that Qualcomm's *conduct*—*i.e.*, its licensing practices—was continuing, rejecting Qualcomm's argument that the FTC was required to show continuing monopoly power. 6ER1384-6ER1387. In doing so, the Court erroneously relied entirely on cases in which the defendant's market share was not an element of the Government's case. *See Evans Prods.*, 775 F.2d at 1088 (alleging defendant engaged in deceptive practices); *see also CFTC v. Hunt*, 591 F.2d 1211, 1220 (7th Cir. 1979) (action under the Commodity Exchange Act); *CFTC v. Yu*, 2012 WL 3283430, at *4 (N.D. Cal. Aug. 10, 2012) (same).

This error led the District Court to extend the injunction into a nascent cellular market that had barely begun deployment: emerging 5G cellular devices. 6ER1387-6ER1390. There was no basis for the Court to conclude that Qualcomm would monopolize a market for 5G modem chips. The FTC did not even attempt to define—much less analyze—such

a market. 3ER681:13-3ER683:6; *cf. United States v. Microsoft*, 253 F.3d at 81 (reversing judgment of attempted monopolization in part because of the failure to define the relevant market).

The District Court did briefly state that "Qualcomm is likely to replicate its market dominance during the transition to 5G." 6ER1387. But as was true in so many contexts, the Court failed to cite any economic analysis supporting that proposition. Instead, it based its view entirely on statements that Qualcomm has a lead in some 5G technology and is "optimistic about its 5G positioning." *Id.* at 6ER1387-6ER1388. But those statements show nothing more than that Qualcomm's efforts positioned it to compete lawfully in the marketplace. *See Grinnell Corp.*, 384 U.S. at 570-71 (no antitrust violation when monopoly power arises "as a consequence of a superior product, business acumen, or historic accident"). The limited evidence about the nascent 5G chip business showed fierce competition: Qualcomm's major competitors—MediaTek, Samsung and Huawei—have all developed or announced 5G modem chips; and Samsung has begun selling 5G-enabled phones using its own chips. 4ER844:15-19; 3ER783:5-21; 3ER784:5-23; 2ER436:24-2ER437:4 (Rog-

ers). As the Third Circuit recently held, the FTC may not rely on a defendant's mere opportunity or possibility to gain monopoly power in a market; rather the FTC must show a likely violation. *Shire ViroPharma*, 917 F.3d at 159-60.

Because the District Court issued a prospective injunction without proof that Qualcomm would maintain its monopoly position in the relevant markets—or gain a monopoly with respect to 5G modem chips—the injunction must be vacated. *See, e.g.*, *FTC v. Amazon.com, Inc.*, 2016 WL 10654030, at *4-6 (W.D. Wash. July 22, 2016) (denying permanent injunction where a violation of FTC Act was identified as still occurring but harm was unlikely to continue); *FTC v. Merch. Servs. Direct, LLC*, 2013 WL 4094394, at *3 (E.D. Wash. Aug. 13, 2013) (refusing to issue injunctive relief when the FTC's evidence about the defendant's conduct was two years old and did not speak to the likelihood of "future violations").

2. The FTC brought this action under the provision of Section 13(b) of the FTC Act that governs enforcement actions in federal court (rather than the FTC's administrative procedures). Under that provision, "the Commission may seek, and after proper proof, the court may issue, a permanent injunction." 15 U.S.C. § 53(b). Based on the plain text, this Court

has held that in such an action the FTC must prove all of the traditional equitable factors, except for irreparable harm. *See FTC v. H.N. Singer, Inc.*, 668 F.2d 1107, 1111 (9th Cir. 1982); *see also FTC v. Consumer Def., LLC*, 926 F.3d 1208, 1212 (9th Cir. 2019). Indeed, the FTC itself has conceded that the District Court must "weigh the equities," not merely "consider the likelihood of success on the merits." *Consumer Defense*, 926 F.3d at 1212.[23]

The District Court rejected Qualcomm's argument that it was required to consider traditional equitable factors, 6ER1383, and refused to weigh the equities. For example, the injunction requires Qualcomm to license competing chipmakers exhaustively, something that would force uniquely upon Qualcomm patent exhaustion issues and inefficiencies that would undermine its existing cellphone licensing program. 3ER586:8-3ER588:21; 3ER577:20-3ER578:22; 3ER621:16-3ER622:18; 2ER428:5-16. Additionally, the injunction's requirement that Qualcomm

[23] Qualcomm's position is that recent Supreme Court precedent requires consideration of irreparable injury as well. *See Winter v. Nat. Res. Def. Council, Inc.*, 555 U.S. 7 (2008); *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006). But that argument is foreclosed by this Court's decision in *Consumer Defense*. Qualcomm accordingly notes the argument to preserve it for further review.

must "negotiate or renegotiate license terms with [OEM] customers," 6ER1393-6ER1394, would deny Qualcomm the benefit of the existing deals it struck with OEMs, many of which reflect months or even years of arm's-length negotiations. The District Court did not attempt to weigh these harms to Qualcomm against the benefits it believed would result from the injunction, or consider a more limited injunction that would avoid or mitigate them.

The District Court also erred by not giving due consideration to the public interest, particularly the harm the injunction will directly cause U.S. national security. *See* 7ER1706-7ER1707; 7ER1709 ¶740; 7ER1711-7ER1712 ¶¶772-776. The Supreme Court has recognized the immense public interest in national security concerns, which can outweigh other equitable factors. *Winter,* 555 U.S. 23-25; *see also Internet Specialties W., Inc. v. Milon-DiGiorgio Enters., Inc.*, 559 F.3d 985, 994 (9th Cir. 2009) (in *Winter*, "the public interest in national security defeated an injunction").

In support of Qualcomm's request for a partial stay of the injunction pending appeal, the United States advised this Court that the injunction could reduce competition and innovation, including particularly in developing 5G technologies. The United States understands that, aside from

chips, Qualcomm is leading in the development of fundamental technologies underlying 5G standards and that development is dependent on Qualcomm's licensing business. Those technologies will propagate widely into non-cellular industries, utilities and critical infrastructure, creating a broad fabric of connectivity and control.

The United States has argued before this Court that the injunction is contrary to "the public interest" because it threatens "competition, innovation, and national security." 2ER331. The Departments of Defense and Energy have specifically concluded that national security is seriously threatened by the injunction. *See* 2ER340 (citing U.S. Treasury's Committee on Foreign Investment in the United States (CFIUS) March 5 Letter, at 1-4 (recognizing the significant "risk to the national security of the United States" that could arise from changing Qualcomm's innovation-focused business model)). The Department of Defense "is seriously concerned that" the injunction issued will harm its ability to provide "mission-critical products and services" to the U.S. Government, by impairing "U.S. leadership in 5G." 2ER340-2ER341. In its view, the injunction's widespread harms will include risk to "nuclear security and the protection of the Nation's . . . nuclear infrastructure," which depend on trusted,

secure, and advanced American wireless communications supplied by Qualcomm. 2ER330; 2ER316-2ER317; *see also* 2ER321-2ER322 ("Reduction in Qualcomm's competitiveness in 5G innovation and standard setting would significantly impact U.S. national security."); 2ER324.[24]

3. The District Court further erred in adopting an injunction that was not sufficiently tailored to address only the competitive harm claimed to have been caused by Qualcomm's conduct. *Lamb-Weston, Inc. v. McCain Foods, Ltd.*, 941 F.2d 970, 974 (9th Cir. 1991). The most glaring example of the injunction's overbreadth is its worldwide reach, without regard to whether the licenses impacted either directly affect U.S. commerce or are actively subject to oversight by foreign regulators.[25] The

---

[24] The United States filed a Statement of Interest requesting that the District Court hold a separate remedial proceeding, in which the United States no doubt would have raised these significant concerns. 2ER350. But the District Court rejected that request. 6ER1392-6ER1393.

[25] The District Court further erred by failing to limit the scope of the injunction so it addresses only licenses involving technologies for which Qualcomm was alleged and proven to have monopoly power, and where Qualcomm was proven to have exercised such monopoly power anti-competitively. The District Court should have excluded license agreements with OEMs that did not purchase modem chips over which Qualcomm was alleged to have monopoly power, as well as licenses negotiated under the supervision or requirements of a foreign enforcement agency. *See supra* p. 34.

FTC Act and Sherman Act only apply to foreign conduct that is proven to have a "direct, substantial, and reasonably foreseeable effect" on domestic commerce. 15 U.S.C. §§ 6a(1), 45(a)(3). The statutes thus exclude "much anticompetitive conduct that causes only foreign injury," *F. Hoffmann-La Roche Ltd. v. Empagran S.A.*, 542 U.S. 155, 158 (2004), because "U.S. antitrust laws concern the protection of American consumers and American exporters, not foreign consumers or producers," *In re Dynamic Random Access Memory (DRAM) Antitrust Litig.*, 546 F.3d 981, 986 (9th Cir. 2008). Relatedly, under principles of comity, U.S. courts properly may "decline to exercise jurisdiction in a case properly adjudicated in a foreign state" in light of the balance of U.S. and foreign interests involved. *Mujica v. AirScan Inc.*, 771 F.3d 580, 598-99 (9th Cir. 2014) (quoting *In re Maxwell Commc'n Corp.*, 93 F.3d 1036, 1047 (2d Cir. 1996)).

As the United States explained in supporting Qualcomm's application for stay, *see* 2ER339, the Government properly may seek "remedies that effectively address harm or threatened harm to U.S. commerce and consumers, while attempting to avoid conflicts with remedies contemplated by their foreign counterparts." U.S. Dep't of Justice & FTC, *Antitrust Guidelines for International Enforcement and Cooperation* § 5.1.5

(Jan. 13, 2017), https://www.justice.gov/atr/internationalguidelines. Addressing conduct outside the United States is only appropriate if "needed to effectively redress harm or threatened harm to U.S. commerce and consumers" and if it is "consistent with" a robust "international comity analysis." *Id.* (collecting cases).

In several respects, the District Court's injunction applies to purely foreign commerce that is subject to active oversight by foreign regulators. The District Court itself acknowledged that foreign agencies have already considered Qualcomm's foreign conduct and the effects in their jurisdictions. 6ER1176-6ER1178. As just one example, the injunction requires Qualcomm to renegotiate so-called Chinese Patent License Agreements (CPLAs). The CPLAs license only Qualcomm's Chinese patents and apply to cellphones made and sold in China for use in China, 3ER606:14-3ER607:3, or for export from China for use in a country in which Qualcomm has no patents (*i.e.*, in developing countries). These CPLAs are the direct result of an extensive investigation by the Chinese government's competition authority, the National Development and Reform Commission (NDRC), which accepted a rectification plan governing Qualcomm's licensing in China; the CPLAs conform to that plan and

those agreements were submitted to the NDRC for its review as it supervised Qualcomm's ongoing licensing in China. 2ER431:8-2ER432:7; 3ER606:13-3ER607:14. Because the CPLAs are in purely foreign commerce and the Chinese Government's interest in the CPLAs far exceeds that of the FTC, the injunction requiring Qualcomm to renegotiate them improperly extends U.S. antitrust law extraterritorially and violates principles of international comity. *See Mujica*, 771 F.3d at 598-99.

Further, the injunction also improperly conflicts with the decisions of foreign regulators. *See Mujica*, 771 F.3d at 598-99. The NDRC considered and rejected the claim that Qualcomm must exhaustively license its Chinese SEPs to chip suppliers. 2ER432:23-2ER433:3. Taiwanese regulators made the identical judgment with respect to Taiwanese chip suppliers. The District Court ignored this conflict and further cited an interim ruling by the Taiwanese regulator to suggest that Qualcomm must license its chip rivals, 6ER1177, but then refused to admit evidence proving that the Taiwanese regulator ultimately agreed to revoke that ruling, and enter into a settlement that "does not require component-level licensing." Press Release, Qualcomm, Qualcomm and Taiwan Fair Trade Com-

mission Reach Settlement (Aug. 9, 2018), https://www.qualcomm.com/news/releases/2018/08/09/qualcomm-and-taiwan-fair-trade-commission-reach-settlement. *See* 1ER239. The District Court thus erred in imposing an injunction that is inconsistent with the decisions of foreign regulators, with respect to foreign patents issued by a foreign sovereign. This extraterritorial overreach would be improper even if the District Court had found that Qualcomm's conduct *generally* has a substantial effect on U.S. commerce (which it did not). *See, e.g.*, *In re Rubber Chems. Antitrust Litig.*, 504 F. Supp. 2d 777, 784 (N.D. Cal. 2007) (rejecting plaintiffs' argument that their single "claim" of antitrust violation involving both U.S. and foreign markets "cannot be split or analyzed for its separate domestic and foreign components"). Because "the type of *injury* involved determines the justiciability of the alleged claims," U.S. courts should not address purely foreign injuries. *See id.* (citing *In re Intel Corp. Microprocessor Antitrust Litig.*, 452 F. Supp. 2d 555, 562 (D. Del. 2006) (rejecting a claim that "foreign conduct with a direct foreign effect should be combined with domestic conduct in an attempt to confer jurisdiction over the foreign conduct under the rubric of a single claim")); *In re Static Random Access Memory (SRAM) Antitrust Litig.*, 2010 WL 5477313, at

*4 (N.D. Cal. Dec. 31, 2010) (non-justiciable claims cannot be accepted "simply by being combined under the rubric of a single claim"); *cf. Cramer Prods., Inc. v. Int'l Comfort Prods., Ltd.*, 931 F.2d 900 (table), at *4 (10th Cir. 1991) (upholding limitation of injunction prohibiting breach of distributor agreement to domestic markets; injunctive relief must be narrowly tailored to the relevant market). The injunction should thus be vacated also for this reason.

V. THE DISTRICT COURT ERRONEOUSLY GRANTED THE FTC SUMMARY JUDGMENT THAT QUALCOMM'S COMMITMENTS TO TWO SDOS REQUIRE IT TO GRANT EXHAUSTIVE LICENSES TO ITS CHIP RIVALS.

Before trial, the District Court granted the FTC partial summary judgment. The Court held that Qualcomm's commitments to two standards-development organizations—the Telecommunications Industry Association ("TIA") and the Alliance for Telecommunications Industry Solutions ("ATIS")—contractually required Qualcomm to license its cellular SEPs "to all comers, including competing modem chip suppliers." 1ER265. The Court accordingly did not hear evidence at trial on the agreements' meaning.

For the reasons given in Part I, *supra*, the District Court's holding that a violation of the SDO agreements could be anti-competitive under

the Sherman Act is erroneous as a matter of law. But even without regard to that error, the District Court's interpretation of the SDO agreements should be vacated. Given the disputed issues of material fact, the agreements' meaning could only properly be determined at trial.

1. The District Court began from the incorrect premise that "Ninth Circuit precedent establishes" the scope of "Qualcomm's FRAND commitments." 1ER265. It relied on decisions in *Microsoft v. Motorola*, which discuss the FRAND contracts used by different SDOs: ITU and IEEE. *Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 875-76 (9th Cir. 2012) (*Microsoft II*); *Microsoft III*, 795 F.3d at 1031. Neither involved the SDOs—or SDO contracts—at issue here. This Court's consideration of separate contracts cannot be controlling here.

Further, even the discussion of the licensing obligations in the *Microsoft* cases was non-binding dictum. *See United States v. Espinoza-Baza*, 647 F.3d 1182, 1191 (9th Cir. 2011). There was no dispute in those cases whether Microsoft (which made end-user products, not components) was entitled to a license under the ITU and IEEE policies. The issue in the case was the proper rate for such a license. *See Microsoft II*, 696 F.3d at 876-77; *Microsoft III*, 795 F.3d at 1040-44. And of course,

there was no dispute in that case as to whether Motorola had to license the manufacture and sale of *chips*.

The District Court nonetheless read *Microsoft III* to hold that a "SEP holder *cannot refuse* a license to a manufacturer who commits to paying the RAND rate," a rule the District Court believed was necessary "[t]o avoid giving the SEP holders the power to prevent other companies from practicing the standard." 1ER265. But that premise was simply wrong. As Qualcomm proved—both in response to the FTC's Motion and at trial—because Qualcomm licenses at the OEM level, it does not assert its SEPs against modem chipmakers.[26] *See* 4ER1004; 3ER600:9-20; 2ER428:5-16.

2. Although the FTC's Motion argued that the "plain meaning" of the terms of Qualcomm's FRAND commitments required the District

[26] The District Court cited filings made by Qualcomm in 1995 litigation with Ericsson, in which Ericsson sought to enjoin Qualcomm, in support of its contention that Qualcomm "trumpeted the same non-discrimination principles it attempts to reject here." 1ER270. The District Court ignored the fact that Ericsson had asserted that cellular *phones* supplied by Qualcomm (which then made phones, a business Qualcomm sold twenty years ago) infringed its SEPs and that Qualcomm was addressing a situation in which Ericsson sought to enjoin Qualcomm's supply of cellular phones and other products (including modem chips). 4ER871 ¶11; 4ER872 ¶¶ A, B.

Court to adopt its interpretation as a matter of law (8ER1763), the District Court went beyond the plain meaning of those terms and relied on extrinsic evidence. 1ER267; 1ER269-1ER272. But Qualcomm also submitted evidence establishing a genuine dispute of fact that precluded summary judgment in favor of the FTC. *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 254 (1986).

The District Court should have found genuine disputes based on the text of the IPR Policies themselves. 4ER1033; 4ER1027. The agreements do not specify any obligation to license SEPs at the chip level. The FTC itself observed that the terms of the Policies required Qualcomm to make licenses available only to those who wished to "implement" or "practice" a cellular standard published by ATIS or TIA. 8ER1764. And Qualcomm provided unrebutted evidence from its engineers and SDO delegates demonstrating that only a complete cellular device (such as a phone or tablet) or cellular infrastructure (such as a base station) can implement or practice such standards. 4ER937-4ER939; 4ER913-4ER914 ¶¶4-6, 4ER916-4ER918; 4ER919-4ER929. In fact, the standards do not describe the functionality of modem chips or even mention them. 4ER938-4ER945; 4ER919-4ER921 ¶¶19-22, 4ER922 ¶27, 4ER931 ¶37. And, to

confirm that a given product successfully meets a standard's technical requirements, engineers test complete cellular devices, not modem chips, against testing specifications published by SDOs. 4ER952.

Under California law, which the parties and the District Court agreed should apply to the FRAND commitments at issue in the Motion, 1ER259, the District Court was required to consider and credit this evidence of the technical or specialized meaning of the IPR Policies. Cal. Civ. Proc. Code § 1861 (agreements must be construed in accordance with a "local, technical, or otherwise peculiar signification"); Cal. Civ. Code § 1644 (courts should follow the meanings of terms "used by the parties in a technical sense" or a "special meaning . . . given to them by usage"). The District Court erroneously ignored the specialized meaning of the terms "implement" and "practice," and instead focused on the fact that some modem chips infringe some Qualcomm SEPs. 1ER272. But infringement of a patent does not determine what "implements" or "practices" an ATIS or TIA standard. The two questions are legally and factually distinct.

The IPR Policies do not require SEP holders to license applicants for the purpose of practicing or implementing any claim of any SEP; rather, they require SEP holders to license applicants for the purpose of

practicing or implementing the standard. The distinction is critical. A claim in a patent can (and often does) specify a narrow function or operation that could be infringed by a single component such as a modem chip and its attendant software, a filter, an RF chip, or an antenna. Each component may support communication by a complete handset. But a standard, unlike a patent claim, specifies thousands of functions that a complete handset shall perform to obtain wireless service. 4ER916-4ER918 ¶¶15-16; 4ER945-4ER946. A modem chip's infringement of some fraction of the thousands of SEPs in a standard does not equate to "implementing" or "practicing" the standard. Qualcomm's unrebutted evidence established that a modem chip neither practices nor implements the standard. At a minimum, that evidence creates a fact issue precluding summary judgment.

3. Qualcomm provided additional extrinsic evidence that the IPR Policies do not require the licensing of modem chips. Under California law, the District Court was *required* to consider such extrinsic evidence, even if the IPR Policies appear to be facially unambiguous. *Trident Ctr. v. Conn. Gen. Life Ins. Co.*, 847 F.2d 564, 569 (9th Cir. 1988) (citing *Pac.*

Gas & Elec. Co. v. G.W. Thomas Drayage & Rigging Co., 442 P.2d 561 (Cal. 1968)).

First, Qualcomm submitted uncontested evidence—including testimony by the FTC's own licensing expert—that there is a decades-long practice in the cellular industry of licensing only OEMs to manufacture and sell complete devices; no major SEP licensor licenses modem chip manufacturers. *See* 3ER751:15-19; 8ER1749:5-17; 8ER1755:6-8ER1758:15; 8ER1758:23-8ER1759:7; 8ER1759:14-19; 7ER1743:16-7ER1744:6; 7ER1737:18-22. California courts treat the post-execution conduct of an agreement as highly relevant, often dispositive, evidence of the meaning of the agreement—even if a court were inclined to interpret the language of the agreement differently. *Crestview Cemetery Ass'n v. Dieden*, 356 P.2d 171, 178 (Cal. 1960) ("[E]ven if it be assumed that the words standing alone might mean one thing to the members of this court, where the parties have demonstrated by their actions and performance that to them the contract meant something quite different, the meaning and intent of the parties should be enforced."); *Kennecott Corp. v. Union Oil of Cal.*, 242 Cal. Rptr. 403, 409-10 (Ct. App. 1987).

The District Court erroneously ignored the extrinsic evidence about the industry's understanding of the IPR Policies and the terms used therein, on the untenable basis that "none of those assertions are tethered to an interpretation of any IPR policy." 1ER270. The District Court also relied upon Qualcomm's "own extensive receipt of SEP licenses to supply modem chips," 1ER270, but Qualcomm has received incoming *cross*-licenses pursuant to *outgoing* licenses it has granted to OEMs that manufacture complete cellular devices, *see* 4ER1014:10-4ER1015:1. Such cross-licenses do not show an industry understanding that FRAND commitments require licensing of modem chips, but rather reflect a general custom that patent holders will not grant outbound portfolio-wide licenses while leaving themselves exposed to opportunistic claims of infringement by their licensees. *See id.*

Second, Qualcomm submitted unrebutted evidence showing that the IPR Policies of ATIS and TIA, the U.S. SDOs, must be interpreted consistently with the IPR Policy of the European SDO, ETSI. All of these SDOs join with each other and other SDOs around the world in global umbrella organizations such as 3GPP. 4ER886; 4ER939-4ER941 ¶10; 4ER915 ¶10. These umbrella organizations are where industry engineers

develop technical specifications that ultimately form cellular standards, such as WCDMA, LTE and 5G. The charters of these umbrella organizations *require*, as a condition of participation, that the SDOs maintain IPR Policies that are compatible with the IPR Policy of every other participant, including ETSI: "Organizational Partnership is open to any Standards Organization . . . which has . . . an Intellectual Property Rights (IPR) Policy which is compatible with those of the Organizational Partners." 4ER1025-4ER1026; 4ER883. Without such compatibility, global standardization efforts would be jeopardized by a patchwork of inconsistent licensing regimes. Tellingly, the FTC's Motion did not dispute evidence submitted by Qualcomm showing that ETSI's IPR Policy requires only licensing of complete cellular devices. 4ER972-4ER973; 4ER1008:6-24; 4ER1009:8-4ER1010:2; 4ER999-4ER1000; 4ER1019:9-17; 7ER1726:4-7ER1727:11; 7ER1728:16-7ER1730:18. Indeed, the FTC's Motion conceded a "need for evidence regarding the meaning of" ETSI's IPR Policy at trial. 8ER1765. The requirement to read the ATIS and TIA IPR Policies consistently with ETSI's IPR Policy presented a genuine dispute of fact that precluded summary judgment.

Third, the American National Standards Institute ("ANSI"), which accredits ATIS, TIA and other American SDOs, has determined that its own Patent Policy does not require component-level licensing. 4ER908. This is critical because the ATIS and TIA IPR Policies are modeled on ANSI's Patent Policy (and ATIS adopted the ANSI Policy *verbatim*). 4ER1030-4ER1031 § 10.4.2; 4ER1038-4ER1041; 4ER861.

For all of these reasons, the District Court erred in granting partial summary judgment, and should have permitted Qualcomm to prove at trial that its FRAND commitments to TIA and ATIS did not require component-level licensing. The grant of partial summary judgment in favor of the FTC should therefore be vacated.

CONCLUSION

The District Court's judgment should be reversed.

August 23, 2019

Respectfully submitted,

/s/ Thomas C. Goldstein

Thomas C. Goldstein
Kevin K. Russell
Eric F. Citron
GOLDSTEIN & RUSSELL, P.C.
7475 Wisconsin Avenue, Suite 850
Bethesda, MD 20814
(202) 362-0636

Gary A. Bornstein
Antony L. Ryan
Yonatan Even
M. Brent Byars
CRAVATH, SWAINE & MOORE LLP
825 Eighth Avenue
New York, NY 10019-7475
(212) 474-1000

Robert A. Van Nest
Eugene M. Paige
Cody S. Harris
Justina Sessions
KEKER, VAN NEST & PETERS LLP
633 Battery Street
San Francisco, CA 94111-1809
(415) 391-5400

Willard K. Tom
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue NW
Washington, DC 20004-2541
(202) 739-3000

Richard S. Taffet
MORGAN, LEWIS & BOCKIUS LLP
101 Park Avenue
New York, NY 10178-0060
(212) 309-6000

Geoffrey T. Holtz
MORGAN, LEWIS & BOCKIUS LLP
One Market, Spear Street Tower
San Francisco, CA 94105-1596
(415) 442-1000

Counsel for Appellant Qualcomm Incorporated

STATEMENT OF RELATED CASES

This case is related to *Stromberg et al. v. Qualcomm Inc.*, No. 19-15159. The *Stromberg et al. v. Qualcomm Inc.* case was before the same district judge as, and coordinated in discovery with, the case appealed from in this action, and the complaints in each underlying case contain similar allegations regarding Qualcomm's business practices. Counsel are not aware of any other related cases pending in this Court.

CERTIFICATE OF COMPLIANCE

This brief contains 26,831 words, excluding the items exempted by Fed. R. App. P. 32(f). The brief's type size and typeface comply with Fed. R. App. P. 32(a)(5) and (6).

I certify that this brief is accompanied by a motion to file a longer brief pursuant to Cir. R. 32-2(a).

August 23, 2019

/s/Thomas C. Goldstein
Thomas C. Goldstein

CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system on August 27, 2019. All participants in the case are registered CM/ECF users, and service will be accomplished by the appellate CM/ECF system.

/s/Thomas C. Goldstein
Thomas C. Goldstein

STATUTORY ADDENDUM

TABLE OF CONTENTS

SECTION 5 OF THE FEDERAL TRADE COMMISSION ACT
15 U.S.C. § 45 (2017)

§45. Unfair methods of competition unlawful; prevention by Commission

(a) Declaration of unlawfulness; power to prohibit unfair practices; inapplicability to foreign trade

(1) Unfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce, are hereby declared unlawful.

(2) The Commission is hereby empowered and directed to prevent persons, partnerships, or corporations, except banks, savings and loan institutions described in section 57a(f)(3) of this title, Federal credit unions described in section 57a(f)(4) of this title, common carriers subject to the Acts to regulate commerce, air carriers and foreign air carriers subject to part A of subtitle VII of title 49, and persons, partnerships, or corporations insofar as they are subject to the Packers and Stockyards Act, 1921, as amended [7 U.S.C. 181 et seq.], except as provided in section 406(b) of said Act [7 U.S.C. 227(b)], from using unfair methods of competition in or affecting commerce and unfair or deceptive acts or practices in or affecting commerce.

(3) This subsection shall not apply to unfair methods of competition involving commerce with foreign nations (other than import commerce) unless—

(A) such methods of competition have a direct, substantial, and reasonably foreseeable effect—

(i) on commerce which is not commerce with foreign nations, or on import commerce with foreign nations; or

(ii) on export commerce with foreign nations, of a person engaged in such commerce in the United States; and

(B) such effect gives rise to a claim under the provisions of this subsection, other than this paragraph.

If this subsection applies to such methods of competition only because of the operation of subparagraph (A)(ii), this subsection shall apply to such conduct only for injury to export business in the United States.

(4)(A) For purposes of subsection (a), the term "unfair or deceptive acts or practices" includes such acts or practices involving foreign commerce that—

(i) cause or are likely to cause reasonably foreseeable injury within the United States; or

(ii) involve material conduct occurring within the United States.

(B) All remedies available to the Commission with respect to unfair and deceptive acts or practices shall be available for acts and practices described in this paragraph, including restitution to domestic or foreign victims.

(b) Proceeding by Commission; modifying and setting aside orders
Whenever the Commission shall have reason to believe that any such person, partnership, or corporation has been or is using any unfair method of competition or unfair or deceptive act or practice in or affecting commerce, and if it shall appear to the Commission that a proceeding by it in respect thereof would be to the interest of the public, it shall issue and serve upon such person, partnership, or corporation a complaint stating its charges in that respect and containing a notice of a hearing upon a day and at a place therein fixed at least thirty days after the service of said complaint. The person, partnership, or corporation so complained of shall have the right to appear at the place and time so fixed and show cause why an order should not be entered by the Commission requiring such person, partnership, or corporation to cease and desist from the violation of the law so charged in said complaint. Any person, partnership, or corporation may make application, and upon good cause shown may be allowed by the Commission to intervene and appear in said proceeding by counsel or in person. The testimony in

any such proceeding shall be reduced to writing and filed in the office of the Commission. If upon such hearing the Commission shall be of the opinion that the method of competition or the act or practice in question is prohibited by this subchapter, it shall make a report in writing in which it shall state its findings as to the facts and shall issue and cause to be served on such person, partnership, or corporation an order requiring such person, partnership, or corporation to cease and desist from using such method of competition or such act or practice. Until the expiration of the time allowed for filing a petition for review, if no such petition has been duly filed within such time, or, if a petition for review has been filed within such time then until the record in the proceeding has been filed in a court of appeals of the United States, as hereinafter provided, the Commission may at any time, upon such notice and in such manner as it shall deem proper, modify or set aside, in whole or in part, any report or any order made or issued by it under this section. After the expiration of the time allowed for filing a petition for review, if no such petition has been duly filed within such time, the Commission may at any time, after notice and opportunity for hearing, reopen and alter, modify, or set aside, in whole or in part any report or order made or issued by it under this section, whenever in the opinion of the Commission conditions of fact or of law have so changed as to require such action or if the public interest shall so require, except that (1) the said person, partnership, or corporation may, within sixty days after service upon him or it of said report or order entered after such a reopening, obtain a review thereof in the appropriate court of appeals of the United States, in the manner provided in subsection (c) of this section; and (2) in the case of an order, the Commission shall reopen any such order to consider whether such order (including any affirmative relief provision contained in such order) should be altered, modified, or set aside, in whole or in part, if the person, partnership, or corporation involved files a request with the Commission which makes a satisfactory showing that changed conditions of law or fact require such order to be altered, modified, or set aside, in whole or in part. The Commission shall determine whether to alter, modify, or set aside any order of the Commission in response to a request made by a person, partnership, or corporation under paragraph 1 (2) not later than 120 days after the date of the filing of such request.

(c) Review of order; rehearing

Any person, partnership, or corporation required by an order of the Commission to cease and desist from using any method of competition or act or practice may obtain a review of such order in the court of appeals of the United States, within any circuit where the method of competition or the act or practice in question was used or where such person, partnership, or corporation resides or carries on business, by filing in the court, within sixty days from the date of the service of such order, a written petition praying that the order of the Commission be set aside. A copy of such petition shall be forthwith transmitted by the clerk of the court to the Commission, and thereupon the Commission shall file in the court the record in the proceeding, as provided in section 2112 of title 28. Upon such filing of the petition the court shall have jurisdiction of the proceeding and of the question determined therein concurrently with the Commission until the filing of the record and shall have power to make and enter a decree affirming, modifying, or setting aside the order of the Commission, and enforcing the same to the extent that such order is affirmed and to issue such writs as are ancillary to its jurisdiction or are necessary in its judgement to prevent injury to the public or to competitors pendente lite. The findings of the Commission as to the facts, if supported by evidence, shall be conclusive. To the extent that the order of the Commission is affirmed, the court shall thereupon issue its own order commanding obedience to the terms of such order of the Commission. If either party shall apply to the court for leave to adduce additional evidence, and shall show to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the Commission, the court may order such additional evidence to be taken before the Commission and to be adduced upon the hearing in such manner and upon such terms and conditions as to the court may seem proper. The Commission may modify its findings as to the facts, or make new findings, by reason of the additional evidence so taken, and it shall file such modified or new findings, which, if supported by evidence, shall be conclusive, and its recommendation, if any, for the modification or setting aside of its original order, with the return of such additional evidence. The judgment and decree of the court shall be final, except that the same shall be subject to review by the Supreme Court upon certiorari, as provided in section 1254 of title 28.

(d) Jurisdiction of court
Upon the filing of the record with it the jurisdiction of the court of appeals of the United States to affirm, enforce, modify, or set aside orders of the Commission shall be exclusive.

(e) Exemption from liability
No order of the Commission or judgement of court to enforce the same shall in anywise relieve or absolve any person, partnership, or corporation from any liability under the Antitrust Acts.

(f) Service of complaints, orders and other processes; return
Complaints, orders, and other processes of the Commission under this section may be served by anyone duly authorized by the Commission, either (a) by delivering a copy thereof to the person to be served, or to a member of the partnership to be served, or the president, secretary, or other executive officer or a director of the corporation to be served; or (b) by leaving a copy thereof at the residence or the principal office or place of business of such person, partnership, or corporation; or (c) by mailing a copy thereof by registered mail or by certified mail addressed to such person, partnership, or corporation at his or its residence or principal office or place of business. The verified return by the person so serving said complaint, order, or other process setting forth the manner of said service shall be proof of the same, and the return post office receipt for said complaint, order, or other process mailed by registered mail or by certified mail as aforesaid shall be proof of the service of the same.

(g) Finality of order
An order of the Commission to cease and desist shall become final—

(1) Upon the expiration of the time allowed for filing a petition for review, if no such petition has been duly filed within such time; but the Commission may thereafter modify or set aside its order to the extent provided in the last sentence of subsection (b).

(2) Except as to any order provision subject to paragraph (4), upon the sixtieth day after such order is served, if a petition for review has been

duly filed; except that any such order may be stayed, in whole or in part and subject to such conditions as may be appropriate, by—

(A) the Commission;

(B) an appropriate court of appeals of the United States, if (i) a petition for review of such order is pending in such court, and (ii) an application for such a stay was previously submitted to the Commission and the Commission, within the 30-day period beginning on the date the application was received by the Commission, either denied the application or did not grant or deny the application; or

(C) the Supreme Court, if an applicable petition for certiorari is pending.

(3) For purposes of subsection (m)(1)(B) and of section 57b(a)(2) of this title, if a petition for review of the order of the Commission has been filed—

(A) upon the expiration of the time allowed for filing a petition for certiorari, if the order of the Commission has been affirmed or the petition for review has been dismissed by the court of appeals and no petition for certiorari has been duly filed;

(B) upon the denial of a petition for certiorari, if the order of the Commission has been affirmed or the petition for review has been dismissed by the court of appeals; or

(C) upon the expiration of 30 days from the date of issuance of a mandate of the Supreme Court directing that the order of the Commission be affirmed or the petition for review be dismissed.

(4) In the case of an order provision requiring a person, partnership, or corporation to divest itself of stock, other share capital, or assets, if a petition for review of such order of the Commission has been filed—

(A) upon the expiration of the time allowed for filing a petition for certiorari, if the order of the Commission has been affirmed or the petition for review has been dismissed by the court of appeals and no petition for certiorari has been duly filed;

(B) upon the denial of a petition for certiorari, if the order of the Commission has been affirmed or the petition for review has been dismissed by the court of appeals; or

(C) upon the expiration of 30 days from the date of issuance of a mandate of the Supreme Court directing that the order of the Commission be affirmed or the petition for review be dismissed.

(h) Modification or setting aside of order by Supreme Court
If the Supreme Court directs that the order of the Commission be modified or set aside, the order of the Commission rendered in accordance with the mandate of the Supreme Court shall become final upon the expiration of thirty days from the time it was rendered, unless within such thirty days either party has instituted proceedings to have such order corrected to accord with the mandate, in which event the order of the Commission shall become final when so corrected.

(i) Modification or setting aside of order by Court of Appeals
If the order of the Commission is modified or set aside by the court of appeals, and if (1) the time allowed for filing a petition for certiorari has expired and no such petition has been duly filed, or (2) the petition for certiorari has been denied, or (3) the decision of the court has been affirmed by the Supreme Court, then the order of the Commission rendered in accordance with the mandate of the court of appeals shall become final on the expiration of thirty days from the time such order of the Commission was rendered, unless within such thirty days either party has instituted proceedings to have such order corrected so that it will accord with the mandate, in which event the order of the Commission shall become final when so corrected.

(j) Rehearing upon order or remand
If the Supreme Court orders a rehearing; or if the case is remanded by the court of appeals to the Commission for a rehearing, and if (1) the time allowed for filing a petition for certiorari has expired, and no such petition has been duly filed, or (2) the petition for certiorari has been denied, or (3) the decision of the court has been affirmed by the Supreme Court, then the order of the Commission rendered upon such rehearing shall become final in the same manner as though no prior order of the Commission had been rendered.

(k) "Mandate" defined
As used in this section the term "mandate", in case a mandate has been recalled prior to the expiration of thirty days from the date of issuance thereof, means the final mandate.

(l) Penalty for violation of order; injunctions and other appropriate equitable relief
Any person, partnership, or corporation who violates an order of the Commission after it has become final, and while such order is in effect, shall forfeit and pay to the United States a civil penalty of not more than $10,000 for each violation, which shall accrue to the United States and may be recovered in a civil action brought by the Attorney General of the United States. Each separate violation of such an order shall be a separate offense, except that in a case of a violation through continuing failure to obey or neglect to obey a final order of the Commission, each day of continuance of such failure or neglect shall be deemed a separate offense. In such actions, the United States district courts are empowered to grant mandatory injunctions and such other and further equitable relief as they deem appropriate in the enforcement of such final orders of the Commission.

(m) Civil actions for recovery of penalties for knowing violations of rules and cease and desist orders respecting unfair or deceptive acts or practices; jurisdiction; maximum amount of penalties; continuing violations; de novo determinations; compromise or settlement procedure

(1)(A) The Commission may commence a civil action to recover a civil penalty in a district court of the United States against any person, partnership, or corporation which violates any rule under this subchapter respecting unfair or deceptive acts or practices (other than an interpretive rule or a rule violation of which the Commission has provided is not an unfair or deceptive act or practice in violation of subsection (a)(1)) with actual knowledge or knowledge fairly implied on the basis of objective circumstances that such act is unfair or deceptive and is prohibited by such rule. In such action, such person, partnership, or corporation shall be liable for a civil penalty of not more than $10,000 for each violation.

(B) If the Commission determines in a proceeding under subsection (b) that any act or practice is unfair or deceptive, and issues a final cease and desist order, other than a consent order, with respect to such act or practice, then the Commission may commence a civil action to obtain a civil penalty in a district court of the United States against any person, partnership, or corporation which engages in such act or practice—

(1) after such cease and desist order becomes final (whether or not such person, partnership, or corporation was subject to such cease and desist order), and

(2) with actual knowledge that such act or practice is unfair or deceptive and is unlawful under subsection (a)(1) of this section.

In such action, such person, partnership, or corporation shall be liable for a civil penalty of not more than $10,000 for each violation.

(C) In the case of a violation through continuing failure to comply with a rule or with subsection (a)(1), each day of continuance of such failure shall be treated as a separate violation, for purposes of subparagraphs (A) and (B). In determining the amount of such a civil penalty, the court shall take into account the degree of culpability, any history of prior such conduct, ability to pay, effect on ability to continue to do business, and such other matters as justice may require.

(2) If the cease and desist order establishing that the act or practice is unfair or deceptive was not issued against the defendant in a civil penalty action under paragraph (1)(B) the issues of fact in such action against such defendant shall be tried de novo. Upon request of any party to such an action against such defendant, the court shall also review the determination of law made by the Commission in the proceeding under subsection (b) that the act or practice which was the subject of such proceeding constituted an unfair or deceptive act or practice in violation of subsection (a).

(3) The Commission may compromise or settle any action for a civil penalty if such compromise or settlement is accompanied by a public statement of its reasons and is approved by the court.

(n) Standard of proof; public policy considerations
The Commission shall have no authority under this section or section 57a of this title to declare unlawful an act or practice on the grounds that such act or practice is unfair unless the act or practice causes or is likely to cause substantial injury to consumers which is not reasonably avoidable by consumers themselves and not outweighed by countervailing benefits to consumers or to competition. In determining whether an act or practice is unfair, the Commission may consider established public policies as evidence to be considered with all other evidence. Such public policy considerations may not serve as a primary basis for such determination.

SECTION 13(B) OF THE FEDERAL TRADE COMMISSION ACT
15 U.S.C. § 53(B) (2017)

§ 53. False advertisements; injunctions and restraining orders

(b) Temporary restraining orders; preliminary injunctions
Whenever the Commission has reason to believe—

(1) that any person, partnership, or corporation is violating, or is about to violate, any provision of law enforced by the Federal Trade Commission, and

(2) that the enjoining thereof pending the issuance of a complaint by the Commission and until such complaint is dismissed by the Commission or set aside by the court on review, or until the order of the Commission made thereon has become final, would be in the interest of the public—

the Commission by any of its attorneys designated by it for such purpose may bring suit in a district court of the United States to enjoin any such act or practice. Upon a proper showing that, weighing the equities and considering the Commission's likelihood of ultimate success, such action would be in the public interest, and after notice to the defendant, a temporary restraining order or a preliminary injunction may be granted without bond: Provided, however, That if a complaint is not filed within such period (not exceeding 20 days) as may be specified by the court after issuance of the temporary restraining order or preliminary injunction, the order or injunction shall be dissolved by the court and be of no further force and effect: Provided further, That in proper cases the Commission may seek, and after proper proof, the court may issue, a permanent injunction. Any suit may be brought where such person, partnership, or corporation resides or transacts business, or wherever venue is proper under section 1391 of title 28. In addition, the court may, if the court determines that the interests of justice require that any other person, partnership, or corporation should be a party in such suit, cause such other person, partnership, or corporation to be added as a party without regard to whether venue is otherwise proper in the district in which the suit is brought. In any suit under this section, process may be served on any person, partnership, or corporation wherever it may be found.

SECTION 1 OF THE SHERMAN ACT
15 U.S.C. § 1 (2017)

§ 1. Trusts, etc., in restraint of trade illegal; penalty

Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal. Every person who shall make any contract or engage in any combination or conspiracy hereby declared to be illegal shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding $100,000,000 if a corporation, or, if any other person, $1,000,000, or by imprisonment not exceeding 10 years, or by both said punishments, in the discretion of the court.

SECTION 2 OF THE SHERMAN ACT
15 U.S.C. § 2 (2017)
§ 2. Monopolizing trade a felony; penalty

Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by fine not exceeding $100,000,000 if a corporation, or, if any other person, $1,000,000, or by imprisonment not exceeding 10 years, or by both said punishments, in the discretion of the court.

FOREIGN TRADE ANTITRUST IMPROVEMENTS ACT
15 U.S.C. § 6A (2017)

§ 6a. Conduct involving trade or commerce with foreign nations

Sections 1 to 7 of this title shall not apply to conduct involving trade or commerce (other than import trade or import commerce) with foreign nations unless—

(1) such conduct has a direct, substantial, and reasonably foreseeable effect—

(A) on trade or commerce which is not trade or commerce with foreign nations, or on import trade or import commerce with foreign nations; or

(B) on export trade or export commerce with foreign nations, of a person engaged in such trade or commerce in the United States; and

(2) such effect gives rise to a claim under the provisions of sections 1 to 7 of this title, other than this section.

If sections 1 to 7 of this title apply to such conduct only because of the operation of paragraph (1)(B), then sections 1 to 7 of this title shall apply to such conduct only for injury to export business in the United States.

35 U.S.C. § 284 (2017)

§ 284. Damages

Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer, together with interest and costs as fixed by the court.

When the damages are not found by a jury, the court shall assess them. In either event the court may increase the damages up to three times the amount found or assessed. Increased damages under this paragraph shall not apply to provisional rights under section 154(d).

The court may receive expert testimony as an aid to the determination of damages or of what royalty would be reasonable under the circumstances.