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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

FEDERAL TRADE COMMISSION,

Plaintiff,

v.

QUALCOMM INCORPORATED, a Delaware corporation,

Defendant.

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

QUALCOMM INCORPORATED'S PRE-TRIAL BRIEF

Dept.: Courtroom 8, 4th Floor
Judge: Hon. Lucy H. Koh

Trial Date: January 4, 2019

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I. INTRODUCTION

The FTC's allegations in this case have no basis in sound antitrust precedent and are inconsistent with the real-world evidence the Court will hear at trial. Rather than attacking anticompetitive conduct that inflicts actual damage and distorts competition, the FTC seeks to enjoin legitimate, procompetitive business practices that facilitated the growth of a phenomenally successful industry that bears all the hallmarks of healthy and vigorous competition. The FTC's theories of harm lack empirical and evidentiary support and ignore historic and current market realities. The Court should decline to follow the FTC down a path that strays from sound antitrust principles, and would reconfigure an entire industry, upend hundreds of existing business relationships, and stifle continued innovation in cellular technology.

Pointing to no antitrust action remotely like this one, the FTC asks the Court to embrace misguided theories of antitrust liability and anticompetitive harm that will not withstand scrutiny. The FTC contends that: (1) Qualcomm's alleged market power in the CDMA and "premium LTE" modem chip markets—and its practice of selling modem chips only to Qualcomm licensees—forced OEMs to pay supra-FRAND patent royalty rates that acted as a "tax" on competing modem chips in those alleged markets; (2) Qualcomm has an antitrust duty to license its cellular standard essential patents ("SEPs") to rival modem chip manufacturers even though licensing SEPs only at the handset level is a widespread industry practice that in no way suggests anticompetitive malice; (3) two of Qualcomm's business agreements with Apple—which *Apple* sought and for which Apple received billions of dollars in consideration—somehow harmed Apple, other OEMs, and hurt competition; and (4) these practices, taken together, substantially harmed competition in the two alleged modem chip markets.

None of these theories holds water. The FTC's convoluted "tax" theory runs headlong into the Supreme Court's opinion in *Pacific Bell Telephone Co. v. linkLine Communications, Inc.*, 555 U.S. 438 (2009), which forecloses "price squeeze" theories of this sort. The FTC's refusal-to-deal theory—which enabled it to escape *linkLine* at the pleading stage—will likewise collapse at trial. Qualcomm has no *antitrust* duty to deal with competing chipmakers—not based on alleged commitments made to standards-development organizations ("SDOs") or for any other

reason. Indeed, the Assistant Attorney General for the U.S. DOJ's Antitrust Division recently stated that "an antitrust cause of action premised on a failure to abide by FRAND commitments would be inconsistent with Section 2 of the Sherman Act."[1] The FTC will also fail to prove a critical element of its case: that Qualcomm's royalty rates were above FRAND. Indeed, the sole expert it relies on for this crucial assertion offers an internally inconsistent, biased, and arbitrary analysis that is divorced from the evidence. Finally—and most fundamentally—the FTC will point to no evidence showing that *any* competing chipmaker left the market or was foreclosed from competing because of Qualcomm's licensing practices. On the contrary, entry has increased and Qualcomm's share of chip sales in the alleged markets has dropped precipitously.

The Court will hear evidence regarding Qualcomm's technological innovations, modem chip business, licensing program, and the fierce competitive landscape that characterizes the alleged CDMA and "premium LTE" chip markets.[2] The evidence will reveal a company that:

- achieved technical superiority through foresight, skill, and massive, risky investments;
- repeatedly catapulted the global cellular industry to new levels through its technology and product innovations, and whose patents are valued for doing so;
- established fair and reasonable licensing terms for each generation of cellular technology, both before the standards were adopted and before it sold a single chip;
- never sought to increase its rates as its patent portfolio grew and its chips gained commercial success; and
- has seen its share of chip sales fall in recent years as competition has continued unabated.

The Court will also hear evidence showing a healthy, competitive, and thriving cellular industry at all levels: technology, chips, and end-consumer cellular devices. The purported CDMA and "premium LTE" markets are no exception. Prices keep falling. Product quality keeps improving. Consumer choices for cellular devices keep broadening. Data speeds keep

[1] *See* Makan Delrahim, Assistant Attorney General, U.S. Dep't of Justice Antitrust Div., *Antitrust Law and Patent Licensing in the New Wild West*, at 2 (Sept. 18, 2018), https://bit.ly/2Terx0F; *see also* Joseph Simons, Chairman, U.S. Fed. Trade Comm'n, *Prepared Remarks at the Georgetown Law Global Antitrust Enforcement Symposium*, at 5–6 (Sept. 25, 2018), https://bit.ly/2ES1OHj ("[A] breach of a FRAND commitment, standing alone, is not sufficient to support a Sherman Act case, and the same is true even for a fraudulent promise to abide by a FRAND commitment.").

[2] Qualcomm disputes that the FTC can properly define these markets for antitrust purposes. For example, the FTC has offered ever-shifting and inconsistent definitions of a "premium" LTE chipset. For purposes of this brief, Qualcomm will assume *arguendo* that the markets exist.

increasing. Innovation and R&D investment keep expanding. And competitors come and go based on their ability to satisfy relentless, market-driven demands.

What the Court will ***not*** hear is evidence demonstrating that any of Qualcomm's challenged conduct caused anticompetitive effects—let alone substantial ones—in a properly defined market, as is required to establish an antitrust violation. Instead, the FTC will rely on a theory of harm that ***assumes*** anticompetitive effects could occur, but neither proves them nor links any actual outcomes to the challenged practices. The Court will see no evidence showing that Qualcomm foreclosed any competitor from competing in the alleged CDMA or "premium LTE" chip markets, and no evidence proving that Qualcomm's now-ended business agreements with Apple harmed anyone in the industry—least of all Apple (which made billions from the deals) or Intel (which now supplies 100% of modems for Apple's latest iPhones and iPads).

Also absent from this case will be any evidence regarding current competitive conditions—a failure of proof that dooms the FTC's request for injunctive relief. The FTC, by its own admission, makes no attempt to address competitive conditions beyond 2016, asking the Court to take it on faith that competitive harm traceable to Qualcomm's conduct will necessarily occur without an injunction. This falls well short of establishing a legal right to injunctive relief, especially relief as broad and potentially disruptive as the FTC seeks.

In sum, the FTC offers the Court an antitrust liability theory lacking support in precedent, sound antitrust policy, or most importantly, the facts. It reflects the type of overreach that contravenes antitrust law's purposes because it threatens to chill, rather than protect, competition and innovation. Qualcomm looks forward to defending itself at trial and to exposing the FTC's theories as factually unsupported and legally faulty. After hearing the evidence and faithfully applying the law, the Court should deny the FTC's request for injunctive relief.

II. RELEVANT BACKGROUND

A. Qualcomm owes its success to innovation and technical superiority.

1. Qualcomm's Fundamental Cellular Inventions

Today, Qualcomm is a global leader in cellular technology. But thirty years ago, it was a fledgling technology startup competing in an industry dominated by large, established companies

such as AT&T, Motorola, Ericsson, and Nokia. The principal issue confronting the nascent cellular industry at the time was how to utilize scarce bandwidth more efficiently to bring cellular communications to a broad market. Many major industry players and their home governments supported a technology known as "time division multiple access," or TDMA, which allowed users to use the same limited spectrum sequentially. But Qualcomm had a different—and better—idea: it invented "code division multiple access," or CDMA, for commercial cellular applications, which coded and sent users' signals *simultaneously* across the airwaves.

Facing an entrenched and cynical industry intent on deploying TDMA, Qualcomm alone took risk after risk to prove that CDMA represented a revolution in cellular communications. Seeing CDMA's promise, a handful of operators across the world deployed 2G CDMA networks, including in the United States, Korea, and Japan. While rolling out CDMA, Qualcomm also developed additional, fundamental inventions focused on transmitting *data* across CDMA networks, an application that cellular carriers initially dismissed as pointless but wound up enabling wideband wireless access to the Internet. In the end, and against the odds, Qualcomm's CDMA technologies covering both voice and data transmissions became the backbone of all 3G cellular technology. True to its innovative roots, Qualcomm did not stop there. Recognizing early on that data transmission and mobile internet access would be the future of cellular communications, Qualcomm continued to develop technologies key to today's high-data, bandwidth-intensive applications, many of which were ultimately standardized as 4G LTE.

None of this innovation comes easily—or cheaply. Since its inception, Qualcomm has invested billions of dollars in R&D, ensuring that it remains at the leading edge of technological innovation. It is no stretch to say that the cellular revolution the world has experienced over the past 30 years would not have happened without Qualcomm taking successive business risks by developing, investing in, and improving CDMA, and then pivoting to invest in LTE a full decade before it was standardized. Qualcomm's work now carries on into 5G technology, which Qualcomm began investing in years ago.

2. Qualcomm's Industry-Leading Modem Chips

Qualcomm has also become a leading-edge manufacturer of chips that support cellular

communications. These chips primarily take two forms: (1) advanced multi-mode modem chips that support cellular devices' connection to multiple cellular networks, such as CDMA, WCDMA, LTE, LTE-Advanced, GSM, or TD-SCDMA networks, and (2) sophisticated systems-on-a-chip ("SOCs") that include the multimode functionality described above, plus an application processor, a graphics processor, global positioning, and other functionality all integrated onto a single piece of silicon. Qualcomm's success in integrating these diverse functions created the demand for cellular SOCs, a product category Qualcomm pioneered.

The evidence will show that Qualcomm's success in CDMA and "premium LTE" modem chip sales had nothing to do with the convoluted "tax" theory underlying the FTC's case. Indeed, the FTC will fail to show a single contemporaneous document suggesting that Qualcomm's royalties disadvantaged rival suppliers. Rather, OEMs chose Qualcomm's modem chips because they are first to market and technically superior (often dramatically so) to competitors' offerings.

B. Qualcomm's Patent Portfolio

Qualcomm's goal has always been to propagate its cellular technologies broadly so that many manufacturers would adopt them, benefitting Qualcomm and the entire industry. To further that goal, Qualcomm has participated in SDOs, which adopted many of Qualcomm's innovations as the foundation of cellular standards. Qualcomm's technical leadership in standards is a product of Qualcomm's early-stage investment and massive efforts to prove to the industry that its ideas actually work and provide tangible benefits in complex, real-world situations.

Qualcomm is widely recognized for the strength, diversity, and size of its cellular SEP portfolio, as well as its extensive portfolio of other standard-essential and non-standard-essential patents. [redacted] Most importantly, the market itself has established and confirmed the value of Qualcomm's patent portfolio. Hundreds of licensees, including some of the world's largest, most sophisticated, and most profitable companies, have agreed to license Qualcomm's patents at the market rates the FTC now attacks.

C. Qualcomm's Licensing Practices

Almost thirty years ago, as a technology startup in need of cash to fund its R&D activities,

Qualcomm began licensing its CDMA technology in exchange for an up-front fee and a (hoped-for) running royalty that the licensee would pay if CDMA ever became commercialized and if the licensee ever sold CDMA devices. This approach allowed Qualcomm to recover the value of its intellectual property without needing to sell any end-user cellular products. This framework continues through today, and through scores of arm's-length negotiations, licensees have agreed to pay Qualcomm royalties commensurate with the patent portfolio's value.

In general, Qualcomm's licenses have been governed by an agreement called a subscriber unit license agreement, or "SULA." Although SULAs' terms vary, generally they require an up-front payment, a cross-license, and running royalties calculated at 5% of the handset's net selling price, subject to certain caps. The cap is currently $400, which translates to a maximum royalty of $20 per device. The license usually includes Qualcomm's cellular and non-cellular SEPs, as well as its non-standard essential patents ("NEPs"), which cover technologies found throughout the finished handset. Qualcomm's licenses grant OEMs access not only to Qualcomm's existing SEPs, but also typically to future SEPs that would be adopted into future releases of the standard.

To buy a Qualcomm chip, an OEM must have a license to make and sell devices that implement at least one of the technologies enabled by the chip. For example, Qualcomm would sell CDMA modem chips—including multimode LTE/CDMA—to any OEM that has a license to make and sell CDMA handsets. Qualcomm would sell WCDMA chips—including multimode LTE/WCDMA—to any OEM that has a license to make and sell WCDMA handsets. Any OEM with a 3G agreement can therefore buy what the FTC calls "premium LTE" Qualcomm chips (which, by and large, are multimode 2G/3G/4G chips); a separate LTE license is not required. The evidence will show that Qualcomm has always required chip customers to first obtain a license covering the devices in which the chips would be incorporated because Qualcomm has never priced its intellectual property into its chip prices; OEMs that bought Qualcomm chips without a license would be using Qualcomm's intellectual property for free.

Understanding *when* OEMs agreed to Qualcomm's license terms and royalty rates is crucial to assessing the FTC's liability theory. The evidence will show that ***more than 100 OEMs took licenses on Qualcomm's typical terms at times when Qualcomm indisputably***

lacked market power in the modem chip markets that the FTC claims distorted negotiations. For example, OEMs agreed to the CDMA royalty rates that the FTC now contends must be the product of purported market power *before* CDMA standardization; *before* Qualcomm started selling CDMA chips; and *before* the FTC alleges Qualcomm obtained market power in CDMA chips. Similarly, OEMs agreed to Qualcomm's WCDMA royalty rates *before* WCDMA standardization; *before* Qualcomm started selling WCDMA chips; and *without* ever obtaining market power in WCDMA chips. What's more, some OEMs took licenses on the very same terms *without ever buying* Qualcomm modem chips.

The royalty rates for each standard have remained largely consistent over time. Qualcomm did not increase them when its chip market share increased; when (according to the FTC) it obtained market power in CDMA or "premium LTE" chips; or when SDOs incorporated its technologies into standards. Indeed, Qualcomm has consistently *capped* the royalties it collects, limiting them to a small percentage of the selling price of today's most expensive handsets.

Finally, like its peers in the cellular industry, Qualcomm has licensed its patents exhaustively only at the device level, rather than at multiple levels in the phone-production chain. The evidence will confirm that this has been standard practice since the industry's beginning. The evidence will demonstrate that Qualcomm (and others) license at the device level because that licensing structure (a) is more efficient for the licensors, licensees, and the industry in general; and (b) comports with the industry's longstanding understanding of the IPR policy promulgated by ETSI, the leading SDO in the cellular space. Moreover, despite not licensing exhaustively at the component level, Qualcomm has never asserted its SEPs (except defensively) against competing modem chipmakers. Thus, other chipmakers—including Intel, MediaTek, Samsung, and others—have been free to make and sell modem chips, do so in increasing volumes, and pay no royalties to Qualcomm.

D. Qualcomm's Former Agreements with Apple

Apple is one of the world's largest designers and marketers of cellular devices. Unlike most other OEMs, which use SOCs, Apple uses "thin modems" for cellular functionality. Chipmakers must design a multimode thin modem to meet Apple's product needs. Since it

introduced the first iPhone in 2007, Apple has sourced thin modems from either Infineon/Intel or Qualcomm, typically relying exclusively on one supplier in any given year. Apple has never been a Qualcomm licensee; it uses licensed contract manufacturers ("CMs") to make its products.

In 2011 and 2013, Qualcomm and Apple executed two agreements related to the supply of modem chips. The agreements were the result of arm's-length negotiations between sophisticated parties and—as one of the world's most profitable companies—Apple had its fair share of negotiating leverage. It used that leverage to persuade Qualcomm to pay Apple various monetary incentives totaling more than [redacted] over five years, conditioned on Apple's use of Qualcomm chips in all its newly-released devices. If Apple decided to use non-Qualcomm chips in certain quantities, the agreements would terminate, and Apple would forego some of the incentives.

The Apple-Qualcomm agreements at issue in this case ended in 2016. The evidence will show that, during the agreements' terms, Apple repeatedly considered and rejected inferior technical solutions that Qualcomm's competitors offered. But as soon as Intel managed to offer a competitive (though still inferior) thin modem that met Apple's requirements in late 2016, Apple opted to include Intel chips in its newly released devices, first alongside Qualcomm and then, beginning with 2018 iPhone and iPad models, exclusively from Intel.

E. Current market conditions show that competition continues unabated.

The FTC has urged this Court to pay no attention to the world as it exists today, relying instead on evidence predating the March 2018 discovery cut-off by several years, and on experts who express no opinions on the industry post-***2016***.[3] The Court's December 13, 2018 pretrial order denied Qualcomm's request to introduce evidence post-dating the March 30, 2018 fact discovery cut-off, including evidence showing a "shift in Qualcomm's market power since the close of discovery." ECF 997 at 10. Qualcomm respectfully submits that it would be error to preclude Qualcomm from introducing evidence regarding current market conditions, and instead relying on years-old evidence as a basis to enjoin current and prospective business practices. The

[3] More precisely, the FTC asks the Court to consider evidence of current market conditions when the FTC believes it helps its cause, while ignoring evidence of current market conditions when such evidence disproves the FTC's case. *Compare* FTC Proposed Findings of Fact ("PFOF") No. 128 (referencing Qualcomm's projected 2018 CDMA market share) *with id.* Nos. 145–47 (halting its "premium LTE" market share analysis in 2016).

factfinder cannot blind itself to the "realities of the market" as they exist "at the time of trial." *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 236, 243 (1993). Indeed, the Ninth Circuit has made clear that, when it comes to "evaluating monopoly power, it is not market share that counts, but the ability to *maintain* market share." *United States v. Syufy Enters.*, 903 F.2d 659, 665–66 (9th Cir. 1990). The Court must therefore consider evidence of market realities right up to the moment the "case c[omes] to trial." *Id.* at 665. Doing so is particularly important for an industry as dynamic as the cellular communications industry.

Even by the discovery cutoff, however, market realities demonstrate that the cellular industry is healthy, competitive, and thriving—and that Qualcomm's share of CDMA and "premium LTE" chip sales has been falling drastically as other chipmakers have decided to invest and compete more aggressively. In 2017, Qualcomm sold just 34% of total modem chips worldwide. Qualcomm's share in the alleged "premium LTE" market fell by more than half between 2012 and 2017, when Qualcomm's share dropped to 49.2%. And it continues to fall as Apple—a "particularly important" OEM according to the FTC—now sources *all* modem chips for new-model iPhones and iPads from Intel, while Samsung and Huawei, the two largest OEMs in the world, now make many of their own modem chips, including CDMA and "premium LTE" chips. Qualcomm's market share in CDMA chips is also falling rapidly as other chipmakers decided to invest in CDMA after China mandated that technology's use in April 2016; MediaTek, Intel, Samsung, and HiSilicon all now make CDMA chips. These trends are not the result of Qualcomm changing any of the challenged practices at issue in this lawsuit; they are the result of competition in a freely functioning market.

III. LEGAL STANDARDS

A. The FTC Act and the Sherman Act

Section 13(b) of the Federal Trade Commission Act (the "FTC Act") permits the FTC to bring a case in federal district court to enjoin conduct that "is violating, or is about to violate" Section 5 of that statute. 15 U.S.C. § 53(b). The FTC alleges that Qualcomm's conduct violates Section 5 because it violates both Section 1 and Section 2 of the Sherman Act, and because it violates Section 5 on a standalone basis. The FTC bears the burden of proof for all three claims.

Section 1 of the Sherman Act prohibits "[e]very contract, combination . . . or conspiracy, in restraint of trade or commerce among the several states." 15 U.S.C. § 1. To prove a violation, the FTC must establish "(1) an agreement or conspiracy among two or more persons or distinct business entities; (2) by which the persons or entities intend to harm or retrain competition; and (3) which actually restrains competition." *City of Vernon v. S. Cal. Edison Co.*, 955 F.2d 1361, 1365 (9th Cir. 1992) (internal quotation marks omitted). In a vertical market case like this one, the FTC must prove that Qualcomm has market power in a properly defined market and that the challenged conduct "has a *substantial* anticompetitive effect that harms consumers in the relevant market." *Ohio v. Am. Express Co.*, 138 S. Ct. 2274, 2284 (2018) (emphasis added).

To prove a Section 2 violation, the FTC must show "(1) the possession of monopoly power in the relevant market and (2) the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident." *United States v. Microsoft Corp.*, 253 F.3d 34, 50 (D.C. Cir. 2001) (internal quotation marks omitted). The FTC must prove that the challenged conduct has "an anticompetitive effect. That is, it must harm the competitive process and thereby harm consumers. In contrast, harm to one or more competitors will not suffice." *Id.* at 58 (internal quotation marks omitted). The rule of reason also applies to Section 2 claims. *See id.* at 59. Accordingly, "[w]hen a legitimate business justification supports a monopolist's exclusionary conduct, that conduct does not violate § 2 of the Sherman Act." *Image Tech. Servs., Inc. v. Eastman Kodak Co.*, 125 F.3d 1195, 1212 (9th Cir. 1997).

Section 5(a) of the FTC Act prohibits "unfair or deceptive acts or practices in or affecting commerce." 15 U.S.C. § 45. Defining the "unfair" business practices that Section 5 prohibits is an inherently "elusive" task that risks inviting "arbitrary or undue government interference with the reasonable freedom of action that has marked our country's competitive system." *E.I. du Pont de Nemours & Co. v. FTC*, 729 F.2d 128, 137 (2d Cir. 1984). Accordingly, Section 5 in no way grants the FTC plenary authority to "bar any business practice found to have an adverse effect on competition." *Id.* at 136. Section 5 requires showing "anticompetitive effect[s]" similar to what the Sherman Act requires. *See Boise Cascade Corp. v. FTC*, 637 F.2d 573, 579, 81 (9th

Cir. 1980). According to the FTC, Section 5 actions are less appropriate if the Sherman Act suffices to address the challenged conduct and are analyzed under the rule of reason framework. *See* Fed. Trade Comm'n, *Statement of Enforcement Principles Regarding "Unfair Methods of Competition" Under Section 5 of the FTC Act* at 1 (Aug. 13, 2015).

B. The Rule of Reason

The FTC has never alleged that any agreement challenged in this case is "per se" unlawful, nor could it under governing antitrust precedent. *See Am. Express Co.*, 138 S. Ct. at 2283–84. Accordingly, each of the FTC's claims will be judged under the "rule of reason" standard, which "weighs legitimate justifications for a restraint against any anticompetitive effects." *Paladin Assocs., Inc. v. Mont. Power Co.*, 328 F.3d 1145, 1156 (9th Cir. 2003).

The rule of reason sets up a burden-shifting framework. The FTC must first show that the challenged conduct "produces significant anticompetitive effects within the relevant product and geographic markets." *Am. Express Co.*, 138 S. Ct. at 2284. Only if the FTC meets that initial burden is the defendant required to "show a procompetitive rationale for the restraint." *Id.* If the defendant does so, then the burden shifts back to the FTC, which must show that "any legitimate objectives can be achieved in a substantially less restrictive manner." *Hairston v. Pac 10 Conference*, 101 F.3d 1315, 1319 (9th Cir. 1996). Where a procompetitive justification goes unrebutted, the FTC "must demonstrate that the anticompetitive harm of the conduct outweighs the procompetitive benefit." *Microsoft*, 253 F.3d at 59 (Section 2 claim); *see also County of Tuolumne v. Sonora Cnty. Hosp.*, 236 F.3d 1148, 1159 (9th Cir. 2001) (Section 1 claim).

C. Antitrust Duty to Deal

Absent an antitrust duty to deal, a company has "no obligation to deal under terms and conditions favorable to its competitors." *linkLine*, 555 U.S. at 450–51. A contractual obligation, however, in no way equals an *antitrust duty* to deal. *See, e.g.*, *SOLIDFX, LLC v. Jeppesen Sanderson, Inc.*, 841 F.3d 827, 843 (10th Cir. 2016) (finding no antitrust duty to deal where the parties had a license agreement but no "preexisting voluntary and presumably profitable course of dealing" (internal quotation marks omitted)); *In re Adderall XR Antitrust Litig.*, 754 F.3d 128, 135 (2d Cir. 2014) ("The mere existence of a contractual duty to supply goods does not by itself

give rise to an antitrust 'duty to deal.'"). The presence of such a duty is crucial in a case involving a vertically integrated market like this one, in which the FTC has alleged that elevated prices for one product (patent licenses) reduced profit margins in another product (modem chips)—i.e., a "price squeeze" claim. In *linkLine*, the Supreme Court held that, absent monopoly power and an antitrust duty to deal with rivals upstream, and below-cost predatory pricing downstream, there is no Section 2 violation. *See* 555 U.S. at 450–51.[4]

This Court distinguished *linkLine* at the pleading stage, concluding that the FTC had adequately alleged that Qualcomm had an antitrust duty to license its SEPs to competing chipmakers. *See* Dkt. No. 134 ("MTD Order") at 35–46.[5] Interpreting *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985), the Court held that Section 2 liability may arise when the defendant "voluntarily alter[s] a course of dealing" and acts with "anticompetitive malice," and where recognizing an antitrust duty to deal would not "present significant judicial administrability concerns." MTD Order at 41.

Aspen Skiing lies "at or near the outer boundary of § 2 liability," and this case "does not fit within the limited exception it recognized." *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko*, 540 U.S. 398, 409 (2004). Indeed, *linkLine* itself confirms that no antitrust duty to deal arises from a regulatory or contractual requirement to provide upstream services to rivals. *linkLine*, 555 U.S. at 443; *see also Huawei Techs., Co., Ltd. v. Samsung Elecs. Co., Ltd.*, 2018 WL 4904895, at *10 (Sept. 25, 2018) ("[T]he refusal to deal doctrine of antitrust is wholly inapplicable in the standards arena."). And, as explained below, the FTC cannot prove that, by refusing to offer SEPs to competing chipmakers, Qualcomm altered a voluntary course of dealing at all, let alone with anticompetitive malice.

What's more, the DOJ's Antitrust Division recently confirmed that, in its view, a refusal to deal does not violate Section 2 unless "it *would make no economic sense* for the defendant but

[4] Qualcomm continues to believe that, because the FTC can neither prove market power and an antitrust duty to deal in the upstream market nor predatory pricing in the downstream market, *linkLine* forecloses its theory as a matter of law. *See linkLine*, 555 U.S. at 452 & n. 3.

[5] The Court has made clear that "whether Qualcomm had an antitrust duty to deal is a distinct legal question" that remains unresolved in this litigation. *See* Hr'g Tr. at 31–32 (Dec. 13, 2018).

for its tendency to eliminate or lessen competition." Brief of the United States as Amicus Curiae at 6, *Viamedia, Inc. v. Comcast Corp.*, No. 18-2852 (7th Cir. Nov. 8, 2018) (emphasis added).[6] The United States explained that "coerced dealing can deter innovation, facilitate collusion, and turn courts into economic regulatory agencies." *Id.* Thus, by the government's own reading of antitrust law, "[i]f a refusal to deal serves a legitimate business purpose, Section 2 makes no further inquiry into its effects on competition." *Id.*

D. Anticompetitive Harm

Showing actual and substantial harm to competition is a necessary element of each claim at issue in this action. *See Amarel v. Connell*, 102 F.3d 1494, 1522 (9th Cir. 1996) (Section 1 claim); *Microsoft*, 253 F.3d at 58 (Section 2 claim); *Boise Cascade*, 637 F.2d at 579–81 (Section 5 claim). Indeed, the United States Supreme Court has made clear that "the plaintiff has the initial burden to prove that the challenged restraint *has a substantial anticompetitive effect* that harms consumers in the relevant market." *Am. Express Co.*, 138 S. Ct. at 2284 (emphasis added); *see also Tanaka v. Univ. of S. Cal.*, 252 F.3d 1059, 1063 (9th Cir. 2001).

A showing of competitive harm, standing alone, is insufficient; the FTC must also prove a causal link between the challenged conduct and the actual, significant competitive harm. *See Trinko*, 540 U.S. at 407; *Rambus Inc. v. FTC*, 522 F.3d 456, 464 (D.C. Cir. 2008). To prove causation, the FTC must "rule out alternative market-based explanations" for the defendant's competitive success. *It's My Party, Inc. v. Live Nation, Inc.*, 811 F.3d 676, 685–86 (4th Cir. 2016). Large market share, even for a sustained period, proves nothing; a company can achieve a large market share "simply by virtue of being a better competitor." *Alaska Airlines, Inc. v United Airlines, Inc.*, 948 F.2d 536, 547 (9th Cir. 1991).

In its Proposed Conclusions of Law ("PCOL"), the FTC has misstated the law in a critical way. The FTC contends that all it must do is show "that the restraint or conduct challenged has or *reasonably appears capable of having* anticompetitive effects." FTC PCOL No. 50 (emphasis

[6] The FTC has long taken the same position. *See* Brief for the United States and the Federal Trade Commission as Amici Curiae Supporting Petitioner at 15, *Trinko*, 540 U.S. 398 (2004) (No. 02-682) ("[C]onduct is not exclusionary or predatory unless it would make no economic sense for the defendant but for its tendency to eliminate or lessen competition.").

added). That suggests *per se* illegality and is wrong as a matter of law. The FTC cannot prevail—indeed cannot meet its initial burden under the rule of reason—without "prov[ing]that the challenged restraint *has a substantial anticompetitive effect* that harms consumers in the relevant market." *Am. Express Co.*, 138 S. Ct. at 2284 (emphasis added). The FTC cannot satisfy that burden with theory, conjecture, or "anecdotal speculation and supposition." *Aerotec Int'l, Inc. v. Honeywell Int'l, Inc.*, 836 F.3d 1171, 1175 (9th Cir. 2016); *see also* Qualcomm's PCOL at Nos. 598–99 (listing cases demonstrating that economic theory and conjecture are insufficient). Put simply, the FTC's burden is a high one, and the Court should hold the agency to it.

IV. DISCUSSION

A. Qualcomm's license agreements are the result of arm's-length negotiations with sophisticated counterparties, not the imposition of market power.

Qualcomm has long maintained the policy of selling modem chips only to OEMs that have licensed Qualcomm's relevant cellular SEPs. That policy violates no antitrust duty and serves several legitimate and procompetitive goals. Because chipmakers sell modem chips at prices that fail to reflect the value of standardized cellular technologies, Qualcomm needs a license in place to ensure compensation for its investments in developing those technologies. Qualcomm's practice also helps ensure a level playing field, so that none of its customers obtain an unfair cost advantage by refusing to pay for the standardized technologies implemented by their handsets. Additionally, Qualcomm's policy helps to curb underreporting of devices that practice Qualcomm technology, while also reflecting Qualcomm's interest in doing business only with companies that respect intellectual property rights.

The FTC, however, sees Qualcomm's benign policy of selling its modem chips only to licensees as anticompetitive. It contends that Qualcomm had market power in the supply of CDMA and "premium LTE" modem chips and used that supposed leverage to force OEMs to take supra-FRAND licenses to Qualcomm's SEPs.[7] The evidence will not support that theory.

[7] Contrary to the FTC's apparent theory, large chip market share or high margins do not inexorably lead to "leverage" over any particular OEM. For example, Qualcomm would have no "chip leverage" over an OEM that buys Qualcomm chips because they are technically superior but would buy others' chips if it didn't like Qualcomm's terms. To assess any supposed "leverage," one must consider each negotiation with each OEM on a case-by-case basis.

First, the history of Qualcomm's licensing negotiations and agreements belies the FTC's theory. Scores of OEMs agreed to Qualcomm's royalty rates before Qualcomm could be said to have any market power in chips. For example, AT&T and Motorola—two of the most powerful companies in the cellular industry at the time—licensed CDMA patents in 1990 for an up-front fee and a reduced 4% royalty rate, *five years before a single Qualcomm chip had left the foundry*, and *before CDMA had even been standardized*. The same is true for Nokia, which signed a CDMA license in 1992 at a more typical 5% rate. This pattern repeated over a dozen times, with OEMs taking licenses before Qualcomm sold a single CDMA chip.

The same pattern held for WCDMA—a technology in which the FTC has never even alleged that Qualcomm held chip market power. Sixteen OEMs took WCDMA licenses, at the same rates the FTC claims are unfair, before Qualcomm sold a single WCDMA multimode chip. Sixty-nine OEMs likewise agreed to Qualcomm's rates before Qualcomm allegedly obtained market power in "premium LTE" chips. Still other OEMs took licenses despite not buying Qualcomm chips for years thereafter, or even at all. Simply put, alleged market power in modem chips did not coerce OEMs to take licenses on non-FRAND terms.

Second, Qualcomm did not increase its royalty rates after it (allegedly) obtained market power in CDMA or "premium-LTE" chips. One would expect a monopolist to exert its market power to increase prices once it achieved its monopoly. That did not happen. What's more, because the FTC has *never* alleged that Qualcomm possessed market power in WCDMA or "***non***-premium" LTE chips, the royalty rates charged to OEMs who bought those chips are ideal comparative benchmarks for rates charged to OEMs who bought CDMA and "premium-LTE" chips. Contrary to the FTC's theory, *those rates are identical*. This is powerful, market-based evidence that Qualcomm did not exert market power to secure supra-FRAND royalty rates.

Third, the primary complainants in this case are sophisticated companies who had their own leverage and used it. They include some of the world's largest and most profitable companies: Apple, Samsung, Huawei, and others. These are not companies that Qualcomm could push around, and Qualcomm hardly had them over a barrel. In fact, the converse was often true. OEMs regularly used their own leverage as large chip customers to pressure Qualcomm on its

licensing terms, obtain discounts and marketing incentives, and demand other concessions.

Fourth, the evidence will not support the FTC's contention that Qualcomm's licensing policies prevented licensees from challenging their existing licenses or pushing back on Qualcomm's offers to renew expiring agreements. Qualcomm ***never*** cut off commercial supply of chips to an existing customer, and Qualcomm ***never*** threatened to interrupt chip supply to a licensee in good standing just because the licensee sought to renegotiate or challenge an existing (or expiring) agreement. To the contrary, Qualcomm often agreed to renegotiate license agreements despite having no duty to do so and routinely engaged in licensing negotiations without mentioning chip supply. The FTC will point to a handful of examples in which OEMs were reminded of Qualcomm's well-known practice of selling chips only to licensees, and of their own contractual obligations. But the FTC will fail to prove any instance in which any OEM agreed to terms it otherwise wouldn't have—let alone to non-FRAND terms—based on the possibility of losing access to modem chips. In fact, Qualcomm often assured OEMs that their chip supply would not be disrupted during licensing negotiations, and during the lone instance when a customer became unlicensed, Qualcomm executives stepped in to ensure that no supply disruption occurred. That is because Qualcomm recognized that cutting off chip supply as a licensing negotiating tactic would undermine business relationships that often took years to develop and destroy the goodwill Qualcomm had established as a reliable supplier and partner.

Fifth, the FTC's "tax" theory is at war with itself. On the one hand, the FTC argues that Qualcomm's "no license-no chips" policy imposes "an added surcharge" that OEMs "must pay to Qualcomm to ensure continued access to Qualcomm's modem chip supply." FTC PFOF No. 344. But on the other hand, the FTC argues that OEMs asked for and received massive "incentive funds" that "induced" them to accept royalty rates and terms they would have otherwise rejected. *Id.* No. 345. Both assertions cannot be true: if Qualcomm's policy of selling chips only to licensees leaves OEMs with *no choice* but to pay a supra-FRAND surcharge for years on end, then Qualcomm would have no need to pay hundreds of millions of dollars in incentives to induce those same OEMs to pay that allegedly coerced "tax." Either Qualcomm's alleged market power in CDMA and "premium LTE" chips is so pervasive that it forces OEMs to pay supra-FRAND

royalty rates, or it isn't. It isn't, and the FTC can't have it both ways.

Sixth, large, sophisticated companies continue to sign up to Qualcomm's licensing program today, despite Qualcomm's lower market share in the alleged chip markets and non-existent 5G chip sales. For example, in January 2018, Samsung signed a new license agreement covering LTE and 5G technology at essentially the same rate as its existing agreement. Samsung entered this agreement despite self-supplying both CDMA and "premium LTE" chips, [redacted]

In sum, the evidence will show that Qualcomm's royalty rates resulted from arm's-length negotiations with sophisticated parties—each with their own negotiating power—rather than from the exertion of market power in a gerrymandered subset of chip sales.

B. Qualcomm's FRAND royalty rates have caused no anticompetitive effects.

Qualcomm has always fulfilled its FRAND obligations to licensees. It consistently established its rates in negotiations occurring before standardization or before any OEM needed its chips. SDO participants typically knew those rates before choosing to incorporate Qualcomm's innovations into a cellular standard. And OEMs agreed to pay those rates because Qualcomm's patent portfolio is worth it, not because they were threatened or coerced into doing so. Qualcomm's rates are market-based, nondiscriminatory, and chip-agnostic. They have remained consistent even as Qualcomm's chip market share increased and more Qualcomm inventions were incorporated into standards. And, most tellingly, Qualcomm's rates during periods in which the FTC alleges Qualcomm possessed market power are no different than times when the FTC makes no such allegation. That empirical, market-based evidence demonstrates that there is no anticompetitive harm in this case.

The FTC's FRAND argument rises and falls on the opinions of Michael Lasinski. But Mr. Lasinski's methods and conclusions are deeply flawed. To assign "portfolio strength metrics" to patent portfolios, he mainly counts standards documents (including editorial and non-technical submissions). His "portfolio strength metrics" therefore give little weight to patent portfolios and no weight to the value of any individual patents within them. He then pronounces a desirable industry-wide, aggregate total on SEP royalties and allocates it among various SEP

holders according to his flawed "portfolio strength metrics." This approach finds no support in the relevant SDO policies, real-world negotiations, or even in the case law on which Mr. Lasinski himself relies. *See TCL v. Ericsson*, 2018 WL 4488286, at *41 (C.D. Cal. Mar. 9, 2018) (noting that using "Approved Contributions" to value patents or apportion an aggregate rate leads to "incorrect results"). Mr. Lasinski also compares Qualcomm's royalty rates to rates he extrapolates from supposedly comparable agreements to license other companies' patent portfolios. He then employs transparently circular reasoning to reach his pre-ordained conclusion: he assumes that the "comparable" rates he selected were reasonable and then derives "portfolio strength" ratios to explain them.

Even if the Court were to credit Mr. Lasinski's results-oriented and unreliable theory, that would not suffice to prove an antitrust violation. To prevail at trial, the FTC must do more than show that Qualcomm's royalty rates are "too high" when compared to some expert-invented FRAND royalty range. It must prove that Qualcomm's royalty rates ***actually harmed competition.*** The FTC cannot make that showing. There is no actual, real-world evidence showing that any chipmaker lost a single socket because of Qualcomm's royalty rates, its policy of selling chips only to licensees, or its decision to license solely at the device level. Nor is there any evidence that Qualcomm's royalty rates somehow reduced other chipmakers' incentives or abilities to invest in modem research and development. Rather, the evidence will show that other chipmakers had more than adequate financial resources to invest in research and development, and they decided when and how to do so based on their own assessments of the chip industry—not because of Qualcomm's royalty rates.

The FTC will also fail to show any harm to the overall chip market. On the contrary, chip demand and chip output both *increased* during the periods when Qualcomm is alleged to have possessed market power, and Qualcomm's share of the alleged market has *declined* over time. This real-world, market evidence stands in stark contrast to the central evidence the FTC relies on, namely, self-serving, after-the-fact complaints from OEMs that would like to pay less. That is hardly sufficient evidence of competitive harm in the CDMA or "premium LTE" chip markets.

C. Qualcomm's policy of licensing SEPs only at the device level is consistent with industry practice and is not anticompetitive.

The evidence will show that players in the cellular communications industry have been licensing their SEPs at the device level since the industry's infancy. To be sure, this Court has ruled that, as a matter of contract interpretation, two SDOs' policies require that SEP-holders make licenses available at the component level.[8] *See* Dkt. 931. Qualcomm respectfully disagrees with that conclusion, but it is of no moment because any such contractual obligation in no way establishes the requisite antitrust duty to deal. *See linkLine*, 555 U.S. at 443.

Licensing only at the device level has been the prevailing approach for Qualcomm and the cellular communications industry because it is the most efficient way to license the technologies embodied in mobile handsets. Qualcomm holds SEPs and NEPs that are practiced all over a handset device, not just by the modem chip. To avoid the herculean task of distinguishing where each of its over 100,000 patents is practiced, Qualcomm, like all major SEP holders, licenses exhaustively at a single level in the supply chain: the complete device. Because licensing only at the device level rather than at multiple points in the supply chain makes sound economic sense and "serves a legitimate business purpose," Qualcomm's decision not to exhaustively license competing chipmakers cannot give rise to Section 2 liability. *Novell, Inc. v. Microsoft Corp.*, 731 F.3d 1064, 1075 (10th Cir. 2013).

Qualcomm will also present evidence showing that this case falls outside *Aspen Skiing*'s "limited exception" to the rule that competitors may refuse to deal with their rivals. *Trinko*, 540 U.S. at 409. Qualcomm in no way altered a preexisting, profitable course of conduct. Rather, the evidence will show that Qualcomm has *never* exhaustively licensed other chipmakers. Instead, Qualcomm—like its industry peers—licenses only at the device level for efficiency's sake.

Aspen Skiing itself makes clear that "[i]n any business, patterns of distribution develop over time; these may reasonably be thought to be more efficient than alternative patterns of distribution that do not develop." *Id.* at 604 n.31 (internal quotation marks omitted). Such a

[8] The Court considered only TIA's and ATIS's policies; it did not address ETSI's policy, which does ***not*** require component-level licensing.

"pattern of distribution" developed in the cellular industry with respect to not licensing SEPs at the chip level, and Qualcomm never "disturb[ed] [that] optimal distribution pattern[]" to exclude a rival. *Id.* On the contrary, rival chipmakers like MediaTek, Intel, and others have entered the market without taking a license from or paying royalties to Qualcomm precisely *because* Qualcomm recovers the value of its patent portfolio only at the device level. Qualcomm has not asserted its patents offensively against other chipmakers, and Qualcomm, as it has committed previously, will agree to refrain from asserting its SEPs against a chipmaker unless it first makes a FRAND license offer. There is nothing anticompetitive about that practice, it does not exclude other chipmakers from any market, and it falls outside *Aspen Skiing*'s limited exception.[9]

In short, FRAND obligations create no antitrust duty to license cellular SEPs to other chipmakers, and Qualcomm's decision to adhere to the industry practice of licensing patents only at the device level in no way connotes anticompetitive malice. Imposing an antitrust duty to deal based on novel interpretations of the law would not only penalize Qualcomm for no reason, but would also disrupt the global cellular industry at large.

D. Qualcomm's business agreements with Apple were not anticompetitive.

The FTC has also argued that two business agreements with a single customer, Apple, were anticompetitive *de facto* exclusivity arrangements that harmed Apple, chip suppliers, and other OEMs. The FTC cannot support those claims. To begin with, the agreements at issue are no longer in effect, and there is no indication that Qualcomm is considering entering into similar agreements with Apple or any other party. Accordingly, there is nothing for this Court to enjoin with respect to Qualcomm's dealings with Apple. *See FTC v. Evans Prods. Co.*, 775 F.2d 1084, 1087 (9th Cir. 1985) ("[A]n injunction will issue only if the wrongs are ongoing or likely to recur."). But the FTC's claims fail on their own terms as well.

[9] Device-level licensing also in no way offends the Third Circuit's holding in *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 314 (3d Cir. 2007), which held that an antitrust plaintiff must allege and prove that the SEP-holder intentionally deceived an SDO pre-standardization, and that the SDO relied on the false promise. No SDO was intentionally deceived when deciding to incorporate Qualcomm's technology into a standard. To the contrary, SDOs were well aware of Qualcomm's licensing practices when they adopted Qualcomm's technologies into standard. Moreover, *Broadcom* does not bind this Court and has never formed the basis of a successful antitrust claim in any district court. *See Huawei*, 2018 WL 4904895, at *11 n.11.

First, none of the agreements at issue harmed Apple, and Apple was in no way coerced into signing them. On the contrary, the evidence will show that in or around 2010, *Apple*—not Qualcomm—sought out a business arrangement through which Qualcomm would supply all of Apple's modem chips. This was hardly unusual; before 2011, Apple relied exclusively on Infineon for its thin modem chips. Seeking a product with worldwide reach from a more capable supplier, Apple's top executives reached out to Qualcomm to see about transitioning its chip business to Qualcomm. But there was a catch: Apple wanted Qualcomm to pay $1 billion to Apple for the design win. The two parties then negotiated at arm's length and settled upon the 2011 Transition Agreement ("TA"). The TA benefitted both parties but carried significant risk for Qualcomm. Qualcomm committed to significant up-front and early payments to Apple, needed to invest additional resources to meet Apple's specifications and timeline, and Qualcomm's production of specifically designed, multimode thin modems would depend heavily on just one purchaser. Because Apple was unwilling to make any firm volume commitments, Qualcomm also risked paying Apple a tremendous amount of money up front and investing a great deal of time and effort into a business relationship that could terminate before Qualcomm could recoup its investments through chip sales—and whenever Apple decided it was in its interest to move to another supplier. In the end, the parties agreed that, if Apple gave more than *de minimis* business to a non-Qualcomm supplier, then it would forfeit future payments and, under certain circumstances, would repay some of the money it had demanded.

In January 2013, the two companies decided to extend their business relationship through the First Amendment to the Transition Agreement ("FATA").[10] Again, Apple again demanded sizeable incentive payments from Qualcomm for future design wins, and through arm's-length negotiations the parties found a mutually-agreeable way to structure those incentives.

Neither of these agreements hurt Apple in any way, shape, or form. [redacted] It is absurd to argue that

[10] The FTC has at times pointed to a separate agreement entered in January 2013, the Business Cooperation and Patent Agreement. But that agreement neither forms the basis for any exclusive dealing claim nor conditioned any payments to Apple on Apple's using Qualcomm chips.

Qualcomm had one of the world's largest companies over a barrel, or that Apple was *victimized* by receiving billions of dollars, along with cutting edge modem chips, from a reliable supplier.

Second, none of the agreements at issue foreclosed competition in the "premium LTE" chip market. Indeed, nothing in the agreements prevented or excluded an equally capable and efficient competitor from seeking and winning Apple business, which is precisely what happened in 2016 when Apple decided to dual-source thin modems from Intel *during the term of the agreement*.[11] Moreover, despite being (allegedly) foreclosed from competing, by 2018 Intel had managed to become Apple's exclusive modem chip supplier for all current-generation iPhones and iPads. And even if the FTC could demonstrate that the Apple-Qualcomm agreements foreclosed other chipmakers from winning *Apple* sockets, the fact remains that Apple sold only 16% of LTE-enabled handsets in 2017. There were plenty of other customers for chipmakers to sell to if they were willing to invest the time and resources needed to compete in that market.

Third, the agreements in no way denied other OEMs access to modem chips. Nothing prevented other chipmakers from selling chips to any OEMs (in fact, nothing prevented them from seeking *Apple*'s business, and several did so during the agreements' terms). Nor does Apple business inexorably generate non-Apple business. Infineon and Intel both exclusively supplied thin modems to Apple, but saw no significant non-Apple business as a result.

E. The FTC has failed to demonstrate any past, present, or future harm to the healthy and thriving cellular industry.

The Court cannot assess the FTC's antitrust claims in a vacuum. It must consider "the realities of the market," including market conditions "at the time of trial." *Brooke Grp.*, 509 U.S. at 236, 243. The evidence will bear out what every cellphone consumer knows: the cellular industry is thriving. Indeed, current industry data show all the hallmarks of a healthy, high-technology, high-innovation market.

To begin with, prices are doing exactly what one would expect in a competitive market.

[11] Evidence from Apple and other chipmakers will show that, between 2011 and at least 2014, no competitor could fulfil Apple's stated technical needs—a fact that had nothing to do with Qualcomm's agreements with Apple. Indeed, Apple reviewed and rejected offers from other chip suppliers during the relevant period.

Average handset prices have fallen dramatically, with smartphone prices falling nearly 34% between 2010 and 2017. This trend changed only in late 2017 and 2018, when Apple—a supposed victim in this case—decided unilaterally to raise iPhone prices by dozens of percentage points, just as it was switching *away* from Qualcomm's chips and even as its CMs stopped paying *any* royalties to Qualcomm. This development is completely at odds with the FTC's theory: Apple stops using Qualcomm chips and stops paying supposedly inflated royalties—indeed, any royalties at all—to Qualcomm, and yet Apple dramatically *increases* its prices.

Competition among chipmakers is and has been intense. Average selling prices for Qualcomm's LTE modem chips have fallen by 44% from 2012 to 2018, and non-Qualcomm modem chips have seen similar declines. The average price of transferring a megabyte of data has plummeted from $8.00 in 2006 to *one cent* in 2016. While prices have fallen, quality and data speeds have improved. The technology is not stagnating, as Qualcomm and its competitors continue to invest heavily in research and development.

Put simply, the global modem chip industry is hardly one that appears to be chafing under the anticompetitive yoke of a monopolist bent on market domination. In fact, no single company dominates the competitive landscape in any segment of the modem chip industry. Qualcomm faces strong and growing competition from Intel, Samsung, Huawei, MediaTek, and Spreadtrum.

Myopically focusing on only two segments of the modem chip industry as they existed two years ago, the FTC argues that Qualcomm's business practices have kept competitors out of the CDMA and "premium LTE" chip markets. *See* FTC PFOF Nos. 132, 152. But pulling the camera back to focus on the overall modem chip industry reveals one of the central fallacies underlying the FTC's liability theory. If the FTC's theory held water—and the challenged practices in fact froze out competition—then Qualcomm should dominate WCDMA and *all* LTE tiers, not just CDMA and "premium LTE." After all, Qualcomm employed the same challenged business practices not only in the CDMA and "premium LTE" chip markets, but also in the WCDMA and non-premium LTE chip markets. And yet the FTC has never alleged—and cannot prove—that those *same* business practices stifled competition or discouraged entry into ***either of those markets***. That is because the practices at issue are not inherently anticompetitive.

The FTC further proves this point by failing to identify a single chipmaker that was forced out of or foreclosed from any relevant market due to any of Qualcomm's allegedly anticompetitive conduct. Dr. Snyder will show that chipmakers have entered and left this dynamic industry for their own reasons, not because of some purported "tax." Chipmakers have chosen to compete in some industry segments and not others; they have invested or cut back in research and development based on their own needs and considerations; some decided to focus on other aspects of their diversified businesses; and some have failed simply because it is hard to design and manufacture high-quality modem chips at competitive prices. These individualized decisions—and the market conditions that precipitated them—cannot be laid at Qualcomm's feet.

F. The FTC's proposed remedies are both unnecessary and overbroad.

This Court can issue an injunction only if it concludes that one is necessary to stop or prevent Qualcomm from violating the antitrust laws in the future; past wrongs are insufficient. *Evans*, 775 F.2d at 1087. Any relief must be narrowly tailored to address specific conduct and actual harm and must not interfere with legitimate business conduct. *United States v. Grinnell Corp.*, 384 U.S. 563, 577–80 (1966); *Lamb-Weston, Inc. v. McCain Foods, Ltd.*, 941 F.2d 970, 974 (9th Cir. 1991). Overbreadth is a special problem in antitrust cases because inhibiting legitimate competitive conduct harms the public interest. *See Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 575 (1986) ("Mistaken inferences in cases such as this one are especially costly, because they chill the very conduct the antitrust laws are designed to protect."). The traditional standards for injunctive relief also hold sway: the Court cannot issue an injunction absent a showing of irreparable injury, if the balance of hardships tilts in Qualcomm's favor, or if an injunction would be contrary to the public interest. *Winter v. N.R.D.C.*, 555 U.S. 7, 23–25 (2008); *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388, 391–92 (2006); *see also* 15 U.S.C. § 53(b) (allowing injunctive relief only after "weighing the equities" and determining that an injunction "would be in the public interest").

None of these factors is met here. The FTC will present no evidence regarding present or future harm to competition. Accordingly, even if the Court accepts the FTC's liability theory and proof, there would still be no grounds to issue an injunction. The FTC must *prove* that

Qualcomm is now and will continue violating antitrust law in the future, and that the relevant markets are suffering and will continue to suffer significant competitive harm as a result. The FTC's evidence will not support that conclusion.

Nor will the FTC prove that the equities favor an injunction or that an injunction would serve the public interest. Indeed, the FTC has made no effort to assess how its proposed remedies would impact innovation and competition in the cellular industry at large—a remarkable omission given the role the FTC asks this Court to play in reshaping a critical industry. Although the FTC's requested relief would undoubtedly cause unpredictable effects, some are obvious. The industry's leading innovator will have to cut back on the research needed to design and implement 5G technology. Shackling the Qualcomm innovation factory will harm downstream competition because Qualcomm's innovations and chip sales have helped smaller players challenge larger, more entrenched, and increasingly vertically integrated companies like Samsung and Apple (and before that, Motorola and Nokia). Moreover, in its zeal to hobble a quintessential American technology company—without a shred of evidence regarding anticompetitive effects—the FTC risks providing an opening for Huawei to dominate 5G technology, and stifling innovation just when it's needed most.

Furthermore, the FTC's proposed remedies are far from narrowly tailored. The FTC requests a broad injunction requiring Qualcomm to depart from the industry's prevailing licensing structure and renegotiate hundreds of agreements that Qualcomm reached over decades in good faith and at arm's length with sophisticated counterparties. The FTC's proposed remedies apply far beyond the alleged markets, the allegedly affected licenses, and the effects the FTC plans to address at trial. They would disrupt smoothly functioning business relationships and supply chains and could create chaos in an otherwise orderly functioning market. And, most fundamentally, they are unnecessary to redress any existing or future harm to competition.

V. CONCLUSION

The facts adduced at trial will show that Qualcomm has engaged in no anticompetitive behavior and has caused no harm in any modem chip market. The Court should decline to enter an injunction that would remedy no problem and injure a competitive and thriving industry.

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