

May 24, 2019

District Court Holds That Qualcomm Patent Licensing and Other Conduct Violates the Sherman Act

Northern District of California Concludes That Qualcomm's Conduct Was Anticompetitive and Violated Duty to Deal with Rival Chipmakers

SUMMARY

On May 21, 2019, in *FTC v. Qualcomm*,¹ the U.S. District Court for the Northern District of California issued findings of fact and conclusions of law, holding that Qualcomm's modem chip licensing and other practices, including its refusal to supply chips unless the customer took a Qualcomm license ("no license, no chips"), violated both Section 1 and Section 2 of the Sherman Act. More specifically, the court concluded that Qualcomm employed its market power in the CDMA (3G) and LTE modem chip markets to coerce cellphone handset manufacturers to sign patent license agreements on Qualcomm's preferred terms, that the resulting royalty rates were "unreasonably high," and that Qualcomm violated its duty to license its standard essential patents ("SEPs") to rival modem chip manufacturers. The court enjoined Qualcomm from engaging in these practices going forward, and required it to renegotiate its prior licenses. As discussed *infra*, the court's decision, if not modified by Qualcomm's promised appeal, will undoubtedly impact Qualcomm and change its licensing model and, because of Qualcomm's prominent role, this will have a large impact on the wireless business as a whole during the transition to 5G technology. Other licensors may modify their policies in light of the decision. Nevertheless, it is unclear to what extent the court's decision will impact other SEP holders, as the decision is premised on the court's detailed review and evaluation of rather extreme facts regarding the combination of Qualcomm's unique licensing practices, its dominant position in the market, and the court's evaluation of Qualcomm's internal documents and prior statements, and evaluation of the credibility of trial witnesses.

BACKGROUND

Qualcomm develops, manufactures, and supplies semiconductor devices, known as “modem chips,” that are used in cellphone handsets. Original equipment manufacturers (“OEMs”) must purchase and install modem chips in cellular handsets to enable them to communicate across cellular networks. Qualcomm also holds standard essential patents (“SEPs”) to widely adopted cellular standards and is a member of two Standard-Setting Organizations (“SSOs”) that require members to license their SEPs on fair, reasonable, and nondiscriminatory (“FRAND”) terms.

In 2017, the Federal Trade Commission (“FTC”) sued Qualcomm under § 5 of the Federal Trade Commission Act,² which prohibits “unfair methods of competition,” including those that may violate the Sherman Act. The FTC alleged that Qualcomm violated § 5 and harmed competition by, among other things, refusing to license its SEPs to competing modem chip suppliers and violating its FRAND commitments. Instead of licensing at the “chip level,” Qualcomm generally licensed to only handset manufacturers who used modem chips. Qualcomm demanded licenses from all handset manufacturers regardless of what brand chip the manufacturers incorporated into their handsets. The FTC alleged that this policy was intended to prevent handset manufacturers from using modem chips supplied by Qualcomm’s competitors.

In addition, the FTC took issue with what it called Qualcomm’s “no license, no chips” policy. The FTC alleged that Qualcomm had market power for certain types of modem chips for which there were few substitutes, and had used the threat of cutting off handset manufacturers’ access to Qualcomm chips to extract onerous licensing terms, including unreasonably high royalties. Finally, the FTC alleged that Qualcomm also harmed chip supply competitors by offering rebates on its royalties to handset manufacturers to induce them to enter exclusive supply agreements for modem chips with Qualcomm.

On November 6, 2018, the court granted the FTC’s motion for partial summary judgment, holding that Qualcomm’s commitments to two SSOs required Qualcomm to license its modem chip SEPs to rival suppliers on FRAND terms.³ Beginning on January 4, 2019, the court held a ten-day bench trial regarding whether Qualcomm’s patent licensing practices for its cellular patents violated Sections 1 or 2 of the Sherman Act, or Section 5 of the FTC Act. Closing arguments took place on January 29, 2019. The court issued its findings of fact and conclusions of law on May 21, 2019.

THE COURT’S DECISION

In a 233-page opinion, Judge Lucy Koh of the U.S. District Court for the Northern District of California concluded that Qualcomm violated the Sherman Act and engaged in anticompetitive conduct against both OEMs and Qualcomm’s chip rivals. The court sided with the FTC and described the basis for its findings at length before ruling on the FTC’s requested injunctive relief.

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Market Definition and Market Share. As a threshold matter, the court determined that there were two relevant markets at issue relating to different cellular network standards for (1) CDMA (a 3G standard) modem chips and (2) premium LTE modem chips. Qualcomm did not contest that the geographic boundaries for both markets were worldwide. The court concluded that Qualcomm possessed monopoly power in both the CDMA modem chip market and the premium LTE modem chip market because (1) Qualcomm maintained large shares of both markets, (2) competitors could not increase output quickly to force down Qualcomm's prices, (3) the chips had no available substitutes, and (4) significant structural barriers prevented entry of new competitors into the markets.

Anticompetitive Conduct. After determining that Qualcomm had market power, the court carried out a "rule of reason analysis" asking "whether Qualcomm's actions harmed competition in the relevant markets."⁴ The court began by stating that "Qualcomm has used its monopoly power in the CDMA and premium LTE modem chip markets to engage in a wide variety of anticompetitive acts against OEMs."⁵ In laying out Qualcomm's anticompetitive conduct, the court relied primarily on Qualcomm's internal documents and found the trial testimony of many Qualcomm witnesses not credible, especially where the testimony appeared to conflict with the witnesses' prior emails, handwritten notes, PowerPoint presentations, or recorded statements.

Qualcomm's Anticompetitive Conduct in Licensing OEMs. The court set out over 70 pages of detailed findings of anticompetitive acts against 16 OEMs—including Apple, LG, Sony, Samsung, Huawei, Blackberry, and Motorola—to induce them to enter patent license agreements with Qualcomm. The practices included refusing to sell its modem chips "exhaustively"—*i.e.*, free of downstream infringement claims—and refusing to sell its modem chips at all to an OEM until that OEM signed a separate patent license agreement that allowed Qualcomm to collect a royalty based on the price of each handset sold by the OEM, regardless of whether it used a Qualcomm chip or a rival's chip. To enforce these practices, Qualcomm cut off or threatened to cut off OEM chip supplies, withheld sample chips, delayed software and threatened to require the return of software, and withheld technical support for the chips it did sell.⁶ Additionally, Qualcomm refused to engage in traditional license negotiations by refusing to provide patent lists or claim charts, and required OEMs to cross-license their patents royalty-free to Qualcomm. In addition to these "sticks," Qualcomm used "carrots," namely, rebates on purchases of its own chips in return for exclusivity and agreements to not purchase competitors' chips. The court noted that these tactics were not only unique within the industry, but were also unique within Qualcomm itself (*i.e.*, Qualcomm did not employ them with its own other products or patents). It found that these tactics, taken as a whole, ensured that (1) OEMs would acquiesce to Qualcomm's onerous licensing terms, (2) enabled Qualcomm to collect "unreasonably high royalty rates on rivals' chips," (3) induced OEMs to deal exclusively with Qualcomm to the detriment of its rivals, and (4) allowed Qualcomm to "extinguish Samsung's antitrust claims and to silence Samsung."⁷

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Anticompetitive Conduct in Refusing to License Rivals. The court next described the anticompetitive nature of Qualcomm's refusal to license its modem chip SEPs to rival chipmakers, including Samsung, Via, Intel, and Project Dragonfly (a joint venture of NTT DoCoMo, Samsung, and others). The court noted that these rivals could not sell modem chips unless they received a license to Qualcomm's SEPs; without a license, the rivals and, critically, their customers, were vulnerable to patent infringement lawsuits from Qualcomm. The court reasoned that Qualcomm's refusal to license its rivals hindered these would-be competitors from entering the market and caused some to exit. For instance, Qualcomm delayed Intel's entry into both the CDMA and premium LTE modem chip markets by refusing to issue a license to its SEPs. In other cases, for example MediaTek, Qualcomm allowed its rival to sell modem chips only to OEMs who were Qualcomm licensees, and only as long as those OEMs remained licensees in good standing. In addition, the agreement required MediaTek to give its rival, Qualcomm, sensitive business information about its customers and the quantity of chips MediaTek sold to each one.

The court found that Qualcomm's anticompetitive practices with respect to its chip rivals prevented potential competitors from entering and forced existing rivals to exit the market and ensured that OEMs would have limited options, which in turn allowed Qualcomm to maintain its market power and continue to demand "unreasonably" high royalty rates.

Qualcomm's Duty to License Rivals. The court concluded that Qualcomm's conduct violated a duty to license rival chipmakers. The court rejected claims by Qualcomm and other SEP holders, including Nokia and Ericsson, justifying their refusal to license at the chip level, as "self-serving and made for litigation," and found that these patent holders had simply followed Qualcomm. The court found that Qualcomm had a duty to license competing chipmakers on two grounds.

First, the court previously had held in granting the FTC's motion for partial summary judgment that Qualcomm was required to license its SEPs to rival modem chip suppliers on terms "free of any unfair discrimination"⁸ because of its membership in two SSOs—the Alliance for Telecommunications Industry Solutions and the Telecommunications Industry Association. That non-discrimination commitment, the court found, required Qualcomm to license "all-comers" who requested a license on FRAND terms, including rival chipmakers. The court emphasized Qualcomm's statements in 2012 meetings with the IRS in which Qualcomm demonstrated that it had understood its FRAND commitments to require licensing rival chipmakers. The court also found that Qualcomm had previously licensed rivals, and stopped doing so "not because Qualcomm's view of FRAND changed, but rather because Qualcomm determined that it was far more lucrative to license only OEMs."⁹ The court dismissed, as "self-serving and pretextual" and "not credible,"¹⁰ Qualcomm's claims that its refusal to license SEPs to its rivals was pro-competitive because it "reduces transaction costs, aligns royalties with the value of the licensed patents, and is much more efficient than the multi-level licensing that would be required if Qualcomm and other innovators licensed other than at the device level."¹¹ Consequently, the

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court concluded that “Qualcomm’s FRAND commitments—consistent with Qualcomm’s prior actions and statements—require Qualcomm to license its SEPs to rival modem chip suppliers.”¹²

Second, the court found that, although the antitrust laws generally impose no duty to aid competitors, they did impose such a duty on Qualcomm given the facts of this case. In reaching this conclusion, the court relied on the Supreme Court’s decision in *Aspen Skiing*,¹³ as applied using a three-factor test developed by the Ninth Circuit in *MetroNet Services Corp. v. Qwest Corp.*¹⁴ Under the *MetroNet* test, a duty to aid rivals may be imposed where (1) the defendant unilaterally terminated a voluntary and profitable course of dealing, (2) its refusal to deal was motivated by anticompetitive malice, and (3) the product the defendant refused to provide to its competitor was already being sold in the retail market to other customers. With respect to the first factor, the court determined that Qualcomm terminated a voluntary and profitable course of dealing when it refused to license its modem chip SEPs to its rivals, even though it had licensed other patents (for other standards) to rival chipmakers in the past. The court concluded that Qualcomm’s statements to the IRS and its contemporaneous documents showed anticompetitive malice because they indicated that Qualcomm refused to license its SEPs because it wanted to harm its rivals and protect its high royalty rates, and showed that Qualcomm had a “willingness to sacrifice short-term benefits—[such as] profitable licenses from modem chip rivals—in order to obtain higher profits in the long run from the exclusion of competition”¹⁵ Lastly, the court determined that there was an existing market for modem chip SEP licenses because Qualcomm had previously licensed other patents for other standards to its rivals, and had received chip-level licenses for their SEPs as well. Consequently, the court concluded that all three *MetroNet* factors were present such that “Qualcomm has an antitrust duty to license its SEPs to rival modem chip suppliers.”¹⁶

Qualcomm’s Exclusive Dealing With Apple and Others. The court determined that Qualcomm’s ability to grant substantial rebates based on chip purchases, as a result of its collection of unreasonably high royalties, allowed it to engage in other anticompetitive conduct by demanding exclusive supply arrangements with Apple and others. This conduct included, for example, (1) entering into a license agreement with Apple that effectively eliminated a potential competing cellular standard, WiMax, as to which Intel had a technological lead over Qualcomm and (2) entering into *de facto* exclusive supply arrangements with Apple that prevented Qualcomm’s rivals from selling modem chips to Apple.

As to the first issue (WiMax), the Qualcomm/Apple Marketing Incentive Agreement, effective January 8, 2007, provided that Qualcomm’s royalty rate rebates to Apple would terminate if Apple sold more than 1,000 WiMax iPhones or licensed any third party to sell WiMax phones. The court highlighted several Qualcomm communications from 2006 and 2007 that explicitly stated that the primary purpose of the agreement was to motivate Apple to exclude WiMax, and Apple’s Chief Operating Officer testified that this agreement caused Apple to stop engaging with WiMax. The

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court thus found that Qualcomm used its agreement with Apple and “the threat of chip supply and its high royalty rate to eliminate WiMax not because WCDMA [Qualcomm’s technology] was a superior technology, but because Qualcomm’s rival was supporting WiMax and Qualcomm was not.”¹⁷

As to the second issue (de facto exclusive supply), in February 2011, Apple and Qualcomm entered into a Transition Agreement that provided Qualcomm would pay Apple to transition its chip business to Qualcomm. The agreement also provided that it (and the rebates to Apple it provided) would automatically terminate if Apple sold any Apple product that used a non-Qualcomm cellular baseband modem. In 2013, Qualcomm and Apple extended the agreement, which prevented Intel and other Qualcomm rivals from working with Apple until 2016, even though Apple had originally intended to purchase modem chips from Intel in 2013.

The court stated that exclusive dealing arrangements were unlawful if they “prevent[] the buyer from purchasing a given good from any other vendor” and “foreclose[] competition.”¹⁸ The court rejected Qualcomm’s claim that its exclusive deals with Apple were necessary to defray “relationship-specific” costs of working with Apple, finding the claim pretextual and contradicted by Qualcomm documents that showed that its sales to Apple would have been profitable even without exclusivity. In light of these examples, and others involving other OEMs, the court concluded that Qualcomm’s exclusive arrangements foreclosed a substantial share of the market and thus bolstered its market power in the CDMA and premium LTE modem chip markets.¹⁹

Qualcomm’s Unreasonably High Royalty Rates. The court next concluded that Qualcomm’s patent license royalty rates (generally from 3–5% of the sale price of a handset) were unreasonably high because they were driven by Qualcomm’s market power in the CDMA and premium LTE chip markets rather than the inherent value of Qualcomm’s SEPs. The court found that Qualcomm’s market power enabled it, uniquely in the industry, to demand high royalties even as it dispensed with traditional practices in licensing negotiations, such as providing patent lists and claim charts to establish the value of its patents. The court also noted that Qualcomm’s own documents showed its understanding that dominance of the chip markets was necessary to drive its licensing program and royalty rates. It found that Qualcomm failed to rebut evidence that its rates could not be justified by the number of its SEPs or its contributions to the relevant standards, which were less than those of others such as Ericsson and Huawei (whose royalty rates are lower than Qualcomm’s). In addition, Qualcomm’s royalty rate was demonstrably unreasonably high, the court found, because the rate had remained the same for 30 years, even as Qualcomm’s SEP share declined with successive standards.

Finally, the court held that Qualcomm’s rates were unreasonably high because of its use of handset device sale prices as the royalty base. The court found that basing royalties on handset value (rather than the value of modem chips) was contrary to the Federal Circuit’s approach to royalty apportionment.

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Under Federal Circuit law, the court found, royalties generally should be based on the value of the smallest salable patent-practicing unit, and if the smallest salable unit is a multi-component product that also includes non-infringing features, the patentee must estimate the value the patented technology contributed to the product.²⁰ The court noted that it had previously held in *GPNE v. Apple, Inc.*²¹ that modem chips were the smallest salable patent-practicing unit in cellular handsets. Because Qualcomm's documents acknowledged that handsets' values are today driven by factors other than the communications provided by modem chips, the court concluded that Qualcomm's use of the entire handset device value as the royalty base rendered its royalties unreasonably high.

The court then described how Qualcomm's unreasonably high royalties imposed inordinate costs on its rival chipmakers, because OEMs are forced to pay the royalty even when their handsets contain rivals' chips. To the extent this surcharge is unreasonably high, the court found, it increased the effective price of rival modem chips, reduced rivals' margins and suppressed their sales, resulting in exclusivity for Qualcomm—which rendered its own chips comparatively cheaper through its rebate programs. The court held that these practices, which “unfairly suppress sales of competing products below the critical level necessary for any rival to pose a real threat,” caused anticompetitive harm because “they exclude competitors from the marketplace and thereby harm competition in general.”²²

Injunctive Relief. Because the court found that Qualcomm's anticompetitive conduct was ongoing or likely to recur, the court granted the following injunctive relief: “(1) Qualcomm must not condition the supply of modem chips on a customer's patent license status and Qualcomm must negotiate or renegotiate license terms with customers in good faith under conditions free from the threat of lack of access to or discriminatory provision of modem chip supply or associated technical support or access to software,” “(2) Qualcomm must make exhaustive SEP licenses available to modem-chip suppliers on fair, reasonable, and non-discriminatory ('FRAND') terms and to submit, as necessary, to arbitral or judicial dispute resolution to determine such terms,” “(3) Qualcomm may not enter express or de facto exclusive dealing agreements for the supply of modem chips,” “(4) Qualcomm may not interfere with the ability of any customer to communicate with a government agency about a potential law enforcement or regulatory matter,”²³ and (5) Qualcomm must submit to compliance and monitoring procedures for seven years and report to the FTC on an annual basis with regards to Qualcomm's compliance with the previous four court-ordered remedies. The court rejected the recent Department of Justice Antitrust Division request to hold a separate hearing on appropriate remedies to the extent Qualcomm was held to have violated the law.

IMPLICATIONS

The court's decision, if it stands unmodified on appeal, will force Qualcomm to rescind or renegotiate its licenses with handset manufacturers (OEMs) and to license its SEPs to its competitors at the chip level. The impact of these changes on Qualcomm and the cellular industry, where Qualcomm currently receives

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more than 50% of all modem chip licensing revenues, may be substantial and widespread (especially in light of the pending introduction of 5G wireless systems).

First, the decision may effectively upend the Qualcomm licensing model, which has shaped and driven the cellular modem competitive landscape for chip suppliers and handset makers alike. If chip rivals are able to obtain SEP licenses from Qualcomm at the chip level, and are free to sell chips to any handset maker whether or not licensed by Qualcomm, chip suppliers and handset makers will need to reassess how the availability of these licenses from Qualcomm at the chip level could impact their businesses. While the market impacts remain to be seen, this may foster renewed competitive tension in the modem market and perhaps, over time, provide more choice and better pricing for handset makers.

Second, Qualcomm licensees will no doubt argue that a license at the chip level should be at a rate substantially less than the current Qualcomm rate based on handset sale prices. Although that issue remains unsettled and is subject to debate, as a result of the findings by Judge Koh specifically with respect to Qualcomm, its license royalty rate is sure to drop thereby saving licensing costs for handset makers (even assuming any chip based royalties are passed on to them) and ultimately consumers. While Qualcomm may find alternative means to maintain the level of its licensing revenues, it is difficult to imagine that chip licenses would generate royalties commensurate with handset royalties in light of Judge Koh's findings about Qualcomm's conduct and its position in the markets.

Third, Qualcomm's chip business will need to adapt. Qualcomm may need to rethink the pricing of its chips, in light of the fact that it can no longer extract a separate licensing revenue stream from handset makers who use those chips, and that it will have to limit its rebates, potentially increasing the price of Qualcomm modem chips relative to its rivals.

Fourth, the court's decision will likely also bring patent exhaustion—which in some respects remains an unsettled area of the law—even more to the forefront in licensing discussions, as industry participants argue about limited license grants and whether exhaustion may occur.

Fifth, the implications for the emerging and significant 5G markets could be significant. 5G promises to deepen and expand that utility of wireless connected devices for consumers and businesses and enable new products and product categories, including through faster mobile connections, connected cars and the Internet of Things (IOT). The decision could result in greater flexibility for implementers of 5G to take licenses at least under Qualcomm SEPs, and potentially lower costs. Qualcomm has and will no doubt argue that the decision will have a detrimental effect on its own (and others') ability to fund research and innovate.

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Finally, outside the cellular industry, the impact of the decision on other SEP owners and licensing in general remains to be seen. The court's opinion addressed a unique set of facts and practices, and—perhaps looking to the appellate court—based many of the findings on determinations about the credibility of witnesses. Nonetheless, if the decision stands without modification after appeal it could impact the typical licensing practices of SEP owners. The debate will then be whether the decision has broad applicability beyond Qualcomm in light of the specific findings about Qualcomm's behavior, its position in the market and its witnesses at trial.

For example, the court's finding that the antitrust laws provide another reason for determining that Qualcomm had a duty to license its chipmaker competitors, and the court's broad interpretation of monopolists' duty to deal with competitors, may cause some to argue that there is a duty to deal outside of the relevant markets regardless of monopoly power or other Qualcomm-specific facts. However, whether all entities holding SEPs are subject to such a duty on antitrust grounds will be subject to debate and may well turn on the ability of the SEP holder to distinguish the facts, including the nature of its patents, its historical practices, and its market power. The court's finding that Federal Circuit law requires SEP holders, at least in the cellular industry, to use the chip as a royalty base is also subject to question and no doubt will be challenged on appeal. Notably, the court failed to discuss the Federal Circuit's decision in *Ericsson, Inc. v. D-Link Systems, Inc.*,²⁴ which held that there is no bright-line rule that patents must be licensed at the chip level—only that the royalty must be proportional to the value of the licensed technology. With respect at least to portfolios which include claims that are not fully embodied at the chip level, “the entire value of [the system] as a marketable article is properly and legally attributable to the [SEP holder's] patented feature.”²⁵

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ENDNOTES

- 1 17-cv-00220, Dkt. 1490 (N.D. Cal. May 21, 2019).
- 2 15 U.S.C. § 45.
- 3 As discussed in our memo to clients dated January 10, 2019, this determination stands in
contrast to the conclusion reached by the Eastern District of Texas in *HTC Corp. v.*
Telefonaktiebolaget LM Ericsson.
- 4 *Qualcomm*, 17-cv-00220, at 41.
- 5 *Id.* at 44.
- 6 *Id.* at 45.
- 7 *Id.* at 114.
- 8 *Id.* at 125.
- 9 *Id.* at 128.
- 10 *Id.*
- 11 *Id.* at 132.
- 12 *Id.* at 134.
- 13 *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985).
- 14 383 F.3d 1124 (9th Cir. 2004).
- 15 *Qualcomm*, 17-cv-00220, at 140 (internal quotation marks omitted).
- 16 *Id.* at 140–41.
- 17 *Id.* at 84–87.
- 18 *Id.* at 142.
- 19 *Id.* at 202 (internal quotation marks and alteration omitted).
- 20 *Id.* (citing *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1327 (Fed. Cir. 2014)).
- 21 2014 WL 1494247, at *10 (N.D. Cal. Apr. 16, 2014), *aff'd*, 830 F.3d 1365 (Fed. Cir. 2016).
- 22 *Qualcomm*, 17-cv-00220, at 184 (citing *United States v. Dentsply Int'l Inc.*, 399 F.3d 181, 191 (3d
Cir. 2005)).
- 23 *Id.* at 227–33.
- 24 773 F.3d 1201 (Fed. Cir. 2014).
- 25 *Id.* at 1227 (internal quotation marks omitted).

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