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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-NMC

DEFENDANT QUALCOMM INCORPORATED AND PLAINTIFF FEDERAL TRADE COMMISSION'S JOINT DISCOVERY STATEMENT REGARDING FTC'S INTERROGATORY RESPONSES

Magistrate Judge:
Hon. Nathaniel M. Cousins

Defendant Qualcomm Incorporated ("Qualcomm") and Plaintiff Federal Trade Commission ("FTC") hereby submit this joint statement. The parties have met and conferred by telephone, but have been unable to reach agreement on the issues addressed herein.

I. Qualcomm's Position

Qualcomm served 13 interrogatories on November 14, 2017. When the FTC refused to answer most interrogatories and said others were "premature," Qualcomm moved to compel. On December 31, 2017, the Court ordered the FTC to "respond to all 13 [of Qualcomm's] interrogatories and their subparts" by January 8, 2018. Dkt. 435. The January 8 responses were again deficient in numerous respects, and after further meeting and conferring, the FTC served further responses on February 7, 2018. Those responses are still deficient with respect to two fundamental aspects of the FTC's action, but after further meeting and conferring, the FTC refused to provide anything more. The Court should order the FTC to either provide all facts in its possession to support these claims or to state unambiguously that it has no such facts.

A. The Response to Interrogatory No. 5 States that There Are Responsive Facts Regarding the Alleged "Premium LTE" Market but Fails to Provide Them

As in any antitrust case, the Complaint must clearly allege a relevant product market. The Complaint refers to a "premium LTE" market with inadequate explanation or definition. The scope of that alleged market is particularly critical here because, as the FTC contends, products quickly cease to be "premium" upon unspecified "technological advances." Resp. to Interrog. 5. Given the hyper-competitive nature of the baseband processor industry, ascertaining the duration of the "premium LTE" products in which Qualcomm is alleged to have market power is a fundamental issue in this case.

To that end, Qualcomm served Interrogatory 5, which sought in subsection (e): "the date, if any, on which each product identified in subsections (a) and (b) [the identified relevant products] ceased to be within the relevant product market, *and a detailed description of why that is the date the product ceased to be in the relevant product market.*"

The FTC mischaracterizes this dispute; it is not the FTC's failure to provide specific *dates*. But the FTC's response concedes there is *some* point in time when each product exits the alleged relevant market, and this Interrogatory also seeks detailed information as to why each product was no longer in the alleged relevant market. The FTC cannot avoid providing this information simply by failing to provide specific dates.

In its response, the FTC refers vaguely to certain features like modem speed, power consumption, and size. Missing from the response are any *facts*, or the requested detailed description of why any product is in or out of the market. For example, what was the "increase in uplink/downlink speed" that excluded from the alleged market each, or any, of the products the FTC lists? Similarly, what reduction in power consumption or reduction in size (chip form factor? process node?) defines the market? The FTC compounds this problem by stating that products are no longer "premium LTE" when they are "no longer considered for inclusion" in flagship or premium phones. That is circular reasoning, as the FTC must first set forth which. features, or the lack thereof, render a chip unsuitable for inclusion in "premium" phones. The generalized nature of the response alone renders it deficient. *See Wilson v. Frito-Lay North America, Inc.*, 260 F. Supp.3d 1202, 1213 (N.D. Cal. 2017) (general references and "conclusory statements" to interrogatories are inappropriate when they request specific facts).

Fact discovery is closing, and with its investigation, the FTC has had more than two years to answer these threshold questions. In this Joint Statement, the FTC acknowledges that it "does

not have the information." But its *Response* states that there *are* facts without providing them. If the FTC has no facts regarding the characteristics that determine whether a chip is in the relevant market or not, then it must amend its response to so state. *See Retiree Support Grp. v. Contra Costa Cnty.*, 2014 WL 7206849, at *3 (N.D. Cal. Dec. 18, 2014) ("The purpose of contention interrogatories is to narrow the issues that will be addressed at trial and to enable the propounding party to determine the proof required to rebut the respondent's position"). It is important that the record be clear on the lack of supporting facts so that if and when the FTC attempts to introduce any evidence on this issue, a challenge can properly be assessed based on the prior failure to provide facts. Fed. R. Civ. P. 37(c)(1).

Given the dynamic market alleged, with technology that is constantly developed, deployed, and then replaced, the transitory nature of the alleged market is an important factor. But from the FTC's response there is no way to identify any meaningful boundaries of its alleged relevant market, when competitive products were included in the market and when they were not, and what the competitive conditions were at any given time in the alleged "premium LTE" baseband processor relevant market. These types of detailed facts are critical for assessing Qualcomm's market power, if any, in the alleged market. *See Adaptive Power Solutions, LLC v. Hughes Missile Sys. Co.*, 141 F.3d 947, 951-52 (9th Cir. 1998) (where competitor entered market after four- to ten-month delay, competitive harm was too "temporary" to be cognizable); *United States v. Bazaarvoice, Inc.*, No. 13-CV-00133-WHO, 2014 WL 203966, at *70 & n.19 (N.D. Cal. Jan. 8, 2014) ("[t]he Court agrees that two years is an appropriate time-frame in this case"). This transience means that a hypothetical monopolist for today's "premium" LTE chips will not have market power beyond a temporary basis because the products will cease to be "premium" in short order.[1] *Cf. United States v. Sungard Data Sys., Inc.*, 172 F. Supp. 2d 172, 182 (D.D.C. 2001) ("rapid changes in computer capabilities and the reduced costs of both hardware and communications" defeated the market definition). But the FTC refuses to provide the facts to determine when or why — in its view — a "premium" LTE chip becomes "non-premium." The FTC should be ordered to provide all facts, or to unambiguously state that it has none.

B. The Response to Interrogatory No. 13 Provides No Facts Regarding the FTC's Core Claim of "Raising Rivals' Costs"

The FTC failed to provide any real information at all in response to Interrogatory Number 13. This Interrogatory seeks the facts relating to a central allegation in the Complaint. The FTC asserts that Qualcomm, through its alleged conduct, "raises rivals' costs" – i.e. raises the costs of competing chip suppliers. Dkt. 140 at 9. Its conduct allegedly "raises the cost of its rivals' products." *Id*. Its conduct allegedly "reduces competitors' sales and margins." Compl. ¶ 90.

Contrary to the FTC's argument, Qualcomm understands the FTC's *theory* of the case and accurately represents it from the FTC's own pleadings. This interrogatory was served to determine if there are any *facts* to support the FTC's theory and claims of anticompetitive foreclosure. Interrogatory Number 13 accordingly asks the FTC to "[i]dentify any specific instances in which a rival baseband processor supplier incurred increased costs caused by any conduct of Qualcomm that You contend was anticompetitive, identify the amount of any such increased costs, and provide all facts Concerning or supporting Your response."

[1] To illustrate, if Qualcomm today has the "best" chip in terms of unspecified speed, efficiency, and size metrics, does it have 100% market share in "premium LTE?" And if two months from now, a competitor leapfrogs Qualcomm with a faster/smaller chip, does Qualcomm's market share drop to 0%? It is critical that the FTC provide the facts and bases for its alleged market.

In response, all the FTC states as a substantive matter is that: "The portion of Qualcomm's royalty that is attributable to its market power taxes an OEM when it purchases a baseband processor from a Qualcomm rival. The tax imposed by Qualcomm represents an economic cost to all rival baseband processor suppliers." This response, while referring generally to a "tax," provides *no* specific responsive facts. It does not identify a single rival baseband processor supplier, a single dollar amount in increased costs to any such supplier, a single OEM, or any facts at all. Nor does it explain *how* the alleged "tax" — an allegedly higher royalty cost *to an OEM* — "represents an economic cost" to rival chip suppliers. It simply provides an *ipse dixit* — that there is a "tax" because Qualcomm raises rivals' costs. But the FTC refuses to say whose costs were raised or by how much or how. By this response, the FTC simply declares anticompetitive harm without disclosing a single fact to support it.

This interrogatory goes to the core allegation of anticompetitive foreclosure in this case: the alleged "raising rivals' costs." The FTC cannot provide broad generalities but must provide the facts, if there are any. *In re Northrop Grumman Corp. ERISA Litig.*, 2010 WL 11468588, at *4 (C.D. Cal. May 17, 2010) (compelling responses to interrogatories that were "core to the action" and requiring that responses "be full and complete in the sense that they must reflect all responsive information then currently in plaintiffs' possession, custody or control"). No chip company pays Qualcomm royalties to manufacture chips. So what are the "raised costs?"

It is not sufficient, as the FTC argues, to simply say that "all" chip suppliers — without naming any — experienced a "tax" in unspecified amounts, relating to unspecified OEMs and unspecified products, at unspecified times, in unspecified "markets," is a sufficient and complete answer. That is plainly wrong. The FTC should be ordered to identify each chip rival whose costs were raised, provide the amounts of any such costs, and provide all facts concerning this claim. Or, if the FTC has no such facts, it must amend its response to state that it has none.

With these interrogatories pending since mid-November, the FTC should be ordered to amend its responses to Interrogatories Nos. 5 and 13 within five days.

II. FTC's Position

The FTC has fully answered Interrogatory 5(e) and Interrogatory 13. The FTC has no further information to provide regarding Interrogatory 5(e). And while the FTC's response to Interrogatory 13 is also sufficient, as a compromise, the FTC will agree to provide a further response to Interrogatory 13 within seven days of the close of fact discovery.

A. The FTC Has Fully Answered Interrogatory 5(e)

The FTC's response to Interrogatory 5 provided a detailed explanation of the two product markets alleged in the FTC's Complaint: the CDMA processor market and the premium LTE market. The FTC's response identified the dozens of specific products Qualcomm and each of its rivals offered in each market, by year. *See* Ex. A at 21-28. The FTC provided all of the information available, despite the fact that expert discovery has not been completed, and product market definition in antitrust cases is informed heavily by the work of expert economists.

Ignoring the considerable information the FTC has provided, Qualcomm now complains that the FTC has not provided the precise date on which each relevant baseband processor product ceased to be included in one of the markets (premium LTE). But the FTC has clearly answered this question, stating:

> With respect to the CDMA market, the products identified in response to parts (a) and (b) of this Interrogatory ceased to be in the relevant market when they were

> discontinued. As of the date of this response, **the FTC does not know the date** on which each discontinued product was discontinued.
>
> With respect to the premium LTE market, the products identified in response to parts (a) and (b) of this Interrogatory ceased to be in the relevant market when subsequent technological advances had reached the point that they were no longer considered for inclusion within flagship or premium tier handsets. […] As of the date of this response, **the FTC does not know the date** on which any of the products identified above was no longer considered for inclusion within flagship or premium tier handsets. Ex. A at 27-28 (emphasis added).

Thus, Qualcomm has received a simple answer: the FTC cannot identify any date on which any relevant product ceased to be within a relevant product market. The FTC is neither concealing any information nor refusing to answer on the grounds that the request is premature. To the contrary, the FTC has stated that it does not have, and cannot reasonably obtain, the information Qualcomm demands. Should the information become available to the FTC through expert analyses or otherwise, the FTC will amend its Interrogatory responses in a timely manner, precisely as envisioned by Fed. R. Civ. Pro. 26(e), which instructs the FTC to correct its response "in a timely manner if the party learns that in some material respect the [response] is incomplete or incorrect."[2]

Qualcomm admits that it has no problem with the fact that the FTC "concedes it does not know" the dates the Interrogatory seeks. *See supra* at 1. Qualcomm's real complaint is that the FTC did not provide a "detailed description of why any product is in or out of the market." *See supra* at 1. But that is not what the Interrogatory asked for. The Interrogatory asked for dates, and since the FTC cannot identify any dates on which any products ceased to be in the relevant market, the FTC also cannot give a "description of ***why that is the date*** the [unidentified] product ceased to be in the relevant product market."

Qualcomm cannot use a Joint Discovery Statement to amend its interrogatories and demand answers to new questions. And it is not well taken for Qualcomm to demand that the FTC, within 5 days, exhaustively explicate the technical characteristics of relevant product markets while Qualcomm's own responses to the FTC's Interrogatories (provided one month before the close of discovery) are replete with objections and refusals to answer interrogatories that are supposedly premature, or "prematurely call[] for expert testimony or opinions at this stage of litigation." *See* Ex. B at 18, 22, 24, 27, 49, 51 (Qualcomm's responses, objecting to FTC Interrogatories No. 4, 5, 6, 8, 13, and 14 on this basis).[3]

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[2] The FTC's General Objections to each of Qualcomm's Interrogatories explicitly invoked Fed. R. Civ. Pro. 26(e), stating "While the FTC responds here to the best of its present ability after a reasonably diligent inquiry, the FTC reserves its right to supplement, revise, or correct any of its responses pursuant to Fed. R. Civ. P. 26(e), preserves its right to present at trial additional evidence or witnesses as they may be discovered or produced, and disclaims any intent to be irrevocably bound by any of the answers it provides until its investigation is complete."

[3] A number of Qualcomm's responses to the FTC's Interrogatory responses are deficient. For some of the FTC's interrogatories, Qualcomm has refused to provide any additional information. For others, Qualcomm has committed to consider whether it will provide additional information, but as of the date of this filing has refused to provide a date certain by which it will respond.

B. The FTC Has Fully Answered Interrogatory 13

Qualcomm's insistence that the FTC provide further details in response to Interrogatory 13 misrepresents the FTC's theory of the case, which the FTC has explained, among other places, in its Opposition to Qualcomm's Motion to Dismiss (ECF No. 140):

- "Under Section 2 of the Sherman Act, using monopoly power to raise rivals' costs of securing customers or critical inputs qualifies as anticompetitive conduct." ECF No. 140 at 9.
- "A monopolist may raise its rivals' costs by inducing customers or suppliers not to deal with rivals at all, or to do so only on unfavorable terms." *Id.* (citation omitted).
- "One kind of unfavorable term that a monopolist may impose is a penalty or 'tax' that the monopolist's competitors or its customers must pay to the monopolist when they transact with one another." *Id.* at 9-10 (citation omitted).
- "Whether the tax is paid by a monopolist's rivals or by its customers makes no difference from either a legal or economic perspective. *See* MANKIW, PRINCIPLES OF MICROECONOMICS 125, 156 (7th ed. 2014) ('When a tax is levied on buyers, the demand curve shifts downward by the size of the tax; when it is levied on sellers, the supply curve shifts upward by that amount. In either case, when the tax is enacted, the price paid by buyers rises, and the price received by sellers falls.')." *Id.* at 10 n. 6.

This is how Qualcomm's actions "raise rivals' costs **of securing customers**." *Id.* at 9. Qualcomm suggests that its rivals' costs of securing customers cannot be increased on the grounds that "[n]o chip company pays Qualcomm royalties to manufacture chips." *See supra* at 3. This is incorrect as a matter of basic economics, as explained above. Qualcomm's rivals face higher costs of securing customers, equal to the amount by which Qualcomm's royalty is elevated above the level that would prevail absent Qualcomm's anticompetitive conduct.

The FTC's Interrogatory response explains this yet again and states which chip rivals' costs were raised:

> The portion of Qualcomm's royalty that is attributable to its market power taxes an OEM when it purchases a baseband processor from a Qualcomm rival. The tax imposed by Qualcomm represents an economic cost to **all rival baseband processor suppliers**. Ex. A at 49 (emphasis added).

Thus, the FTC has provided a complete explanation. Qualcomm claims it needs to know "each chip rival whose costs were raised," and the answer is: all rival baseband suppliers. Qualcomm claims it needs to know "the amounts of any such costs," and the answer is: its rivals' economic costs of securing customers were increased by the portion of Qualcomm's royalties which reflect Qualcomm's monopoly power in the markets for CDMA and premium LTE baseband processors.

While no further response is required, as a compromise, the FTC offers to provide a further response to Interrogatory 13 within seven days of the close of fact discovery. Qualcomm will not be prejudiced by this schedule, as the FTC has already provided sufficient information for Qualcomm to conduct its discovery.

Dated: March 16, 2018

Respectfully submitted,

FEDERAL TRADE COMMISSION,

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REDACTED VERSION OF DOCUMENT(S) SOUGHT TO BE SEALED

EXHIBIT A

REDACTED VERSION OF DOCUMENT(S) SOUGHT TO BE SEALED

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-NMC

PLAINTIFF FEDERAL TRADE COMMISSION'S SECOND AMENDED OBJECTIONS AND RESPONSES TO DEFENDANT QUALCOMM'S FIRST SET OF INTERROGATORIES

Pursuant to Federal Rules of Civil Procedure 26 and 33 and the Local Civil Rules of the United States District Court for the Northern District of California, the Case Management Orders entered by the Court in the above-captioned action on April 19, 2017 (ECF No. 75) and November 15, 2017 (ECF No. 308), and the Protective Order Governing Confidential Material entered May 1, 2017 (ECF No. 81) ("Protective Order"), Plaintiff Federal Trade Commission ("FTC") submits these Second Amended Objections and Responses to Defendant Qualcomm Incorporated's First Set of Interrogatories ("First Interrogatories"), dated November 14, 2017.

The FTC answers Qualcomm's First Interrogatories to the best of its knowledge at the present time, based upon its investigation to date. The FTC will supplement and amend these objections and responses in accordance with Federal Rule of Civil Procedure 26(e), including by asserting additional or different objections when and if it becomes necessary.

GENERAL OBJECTIONS

The following General Objections apply to each of Qualcomm's Interrogatories and are incorporated into each subsequent Interrogatory. The assertion of the same, similar, or additional

objections or the provision of partial answers in response to one part of an Interrogatory does not waive any of the FTC's General Objections as to the other parts of the Interrogatory.

1. These objections and responses are made solely for the purposes of this action. Each objection and response is without waiver or limitation of the FTC's right to object to the use of any information in any subsequent proceeding in, or trial of, this or any other action. The FTC reserves the right to raise and rely upon such other and further objections as may become apparent during the course of responding to discovery.

2. The FTC objects to each Interrogatory, Definition, and Instruction to the extent that it would impose obligations broader than those required or authorized by the Federal Rules of Civil Procedure or any applicable order or rule of this Court.

3. The FTC objects to each Interrogatory to the extent that it seeks information subject to a privilege or protection from disclosure including the work product doctrine, the attorney-client privilege, the deliberative process privilege, the government informant privilege, the law enforcement investigative privilege, the common interest doctrine, and/or any other applicable privilege or protection from disclosure.

4. The FTC objects to each Interrogatory, Definition, and Instruction to the extent it seeks cumulative or duplicative information, including information cumulative or duplicative of the information found in the documents that the FTC produced or will produce to Qualcomm in response to Defendant Qualcomm's Requests for Production of Documents.

5. The FTC objects to the Interrogatories, Definitions, and Instructions as premature to the extent they require the FTC to identify "all facts and evidence" the FTC will use to respond to the Interrogatories before the completion of fact discovery, as the FTC's response will be subject to the information it learns during discovery. While the FTC responds here to the best of its present ability after a reasonably diligent inquiry, the FTC reserves its right to supplement, revise, or correct any of its responses pursuant to Fed. R. Civ. 9. 26(e), preserves its right to present at trial additional evidence or witnesses as they

may be discovered or produced, and disclaims any intent to be irrevocably bound by any of the answers it provides until its investigation is complete.

6. The FTC objects to the Interrogatories, Definitions, and Instructions to the extent that they require the FTC to disclose expert materials prematurely. Fed. R. Civ. P. 26(a)(2) and the Case Management Order entered into on November 14, 2017, govern the time and manner of the FTC's disclosure of its expert witnesses and their testimony or analysis, and sets the close of expert discovery on July 20, 2018. The FTC will submit its expert reports in accordance with the deadlines set forth in the Case Management Order and incorporates in its answers its expert reports, and any rebuttals, once submitted.

7. The FTC objects to each Interrogatory, Definition, and Instruction to the extent that it purports to require the FTC to draw subjective or legal conclusions, or are predicated on subjective or legal conclusions or arguments. Subject to and without waiving any objections, the FTC states that any response the Interrogatories is not intended to provide, and shall not constitute or be construed as providing, an admission concerning any of the terms used in the Interrogatories.

8. The FTC objects to Definition E, defining the term "Common Interest Agreement," as overly broad, vague, ambiguous, and inaccurate to the extent, as used in the Interrogatories, the definition implies that an "Agreement" is necessary to avoid waiver of a legal privilege or protection from discovery.

9. The FTC objects to Definition G, defining the terms "FTC," You," or "Your," as overly broad, vague, and ambiguous to the extent, as used in the Interrogatories, the definition calls for information from "agents," "representatives," and individuals "purporting to act" on the FTC's behalf. Unless otherwise stated, the FTC will interpret "FTC," You," or "Your" to include only the United States Federal Trade Commission, including its employees, attorneys, and consultants.

10. The FTC objects to each Instruction to the extent that it is inconsistent with any agreement among the parties or any order entered by the Court, including the Joint Case

Management Statement entered November 8, 2017 (ECF No. 286), the Protective Order, the Joint Stipulation and Discovery Coordination Order entered September 22, 2017 (ECF No. 207) ("Coordination Order"), and any Order Regarding Discovery of Electronically Stored Information entered by the Court.

Neither these General Objections, nor the Specific Objections and Responses below, constitute an admission of the existence of any information sought, the relevance or admissibility of any response, or the truth or accuracy of any statement or characterization contained in any particular Interrogatory. The FTC further reserves all evidentiary objections and issues under the Federal Rules of Evidence.

OBJECTIONS AND RESPONSES TO SPECIFIC INTERROGATORIES

Subject to and without waiver of the foregoing General Objections, or any other objections or claims of privilege, the FTC presents its Specific Objections and responses to Qualcomm's First Interrogatories.

Interrogatory No. 1

Provide a complete and detailed description of all remedies You are seeking in this matter, including, to the extent any disgorgement or other monetary relief is sought, the monetary amount of the disgorgement or other relief You are seeking Your methodology for calculating the amount; and, to the extent injunctive or declaratory relief is sought, each agreement, conduct, policy, practice or course of action that You seek the Court to prohibit, to declare unlawful or to compel.

The FTC incorporates by reference its General Objections. The FTC objects to this interrogatory as premature because fact discovery is ongoing, expert discovery has not begun, and a trial on the merits is not scheduled until 2019. A "complete and detailed description of all remedies" the FTC seeks is subject to facts as they are developed through fact and expert discovery and proven at trial.

Interrogatory No. 5

For each relevant product market that You allege in Your Complaint, provide the following information Concerning each market with respect to the entire time period each relevant market is alleged to have existed:

a) all Qualcomm products that are or were included in the alleged product market, and the time period(s) during which such products are or were included;

b) all non-Qualcomm products that are or were included in the alleged product market, and the time period(s) during which such products are or were included;

c) the shares of all participants in the alleged product market over the entire time period during which each relevant market is alleged to have existed;

d) the date on which the alleged market came into existence and a detailed description of why that is the date the product market came into existence;

e) the date, if any, on which each product identified in subsections (a) and (b) ceased to be within the relevant product market, and a detailed description of why that is the date the product ceased to be in the relevant product market; and

f) the time period during which Qualcomm allegedly had market or monopoly power in each relevant alleged market, including Your basis for alleging that "from at least 2012 through September 2015, Qualcomm's annual worldwide share of premium LTE baseband processor sales exceeded 80%".

The FTC incorporates by reference its General Objections. The FTC specifically objects to this interrogatory to the extent any attempt is made to use the FTC's response to limit its proof at trial. The FTC will continue to receive and review additional information as part of the ongoing discovery process. Moreover, the deadline for the disclosure of the FTC's initial expert materials is April 20, 2017, and the interrogatory impermissibly seeks the premature and non-reciprocal disclosure of such materials. The FTC will respond based on the information reasonably and presently known to it, and reserves the right to supplement or amend its responses as its collection and review of the evidence continues, and based on expert discovery.

Subject to and without waiving the foregoing general and specific objections, the FTC responds as follows:

(a)

CDMA

The FTC has described the characteristics of baseband processors included in the alleged CDMA market in its First Amended Response to Interrogatory 4(c). As of the date of this response, the FTC's assessment of the Qualcomm baseband processors included in the alleged CDMA market are:



[redacted]

Premium LTE

The below table provides the FTC's assessment, as of the date of this response, of the Qualcomm baseband processors that offered premium LTE capability, by year.

[redacted]

[redacted]

(b)

CDMA

The FTC has described the characteristics of baseband processors included in the alleged CDMA market in its First Amended Response to Interrogatory 4(c). As of the date of this response, the FTC's assessment of the non-Qualcomm baseband processors included in the alleged CDMA market are:

[redacted]

[redacted]

[redacted]

[redacted]

Premium LTE

The below table provides the FTC's current assessment of the non-Qualcomm baseband processors that offered premium LTE capability, by year.

[redacted]

[redacted]

(c)

As of the date of this response, the FTC has not calculated the share of each participant within each relevant product market over the entire time period during which each relevant market existed. The FTC will submit its expert reports in accordance with the deadlines set forth in the Case Management Order and hereby incorporates its expert reports, and any rebuttals, once submitted.

Based on the best information available to the FTC, market shares of participants in the CDMA baseband processor market have varied only slightly over time. Qualcomm's market share has exceeded [redacted], globally, since at least 2006. In 2015, Qualcomm's market share in the CDMA baseband processor market was [redacted] in the U.S. and Canada. [redacted] Documents containing information relevant to the market shares of participants in the CDMA baseband processor market include the following, each of which is available to Qualcomm:

[redacted]

Documents containing information relevant to the market shares of participants in the premium LTE baseband processor market include the following, each of which is available to Qualcomm: [redacted]

[redacted]

(d)

The CDMA baseband processor market has existed at least since carriers adopted CDMA technology, and OEMs began designing and selling handsets that were compatible with that technology to customers.

The premium LTE baseband processor market has existed at least since carriers adopted LTE technology, and OEMs began designing and selling premium handsets that were compatible with that technology to customers. Initially, all LTE baseband processors were premium products, because all included the most advanced LTE technology then available, and competed for design wins in premium handsets. At least as early as 2011, however, the LTE market began to segment into a premium-tier and a second tier. [redacted] From that time period, a market for premium LTE baseband processors came into existence that differed from the market for non-premium LTE baseband processors. [redacted]

(e)

With respect to the CDMA market, the products identified in response to parts (a) and (b) of this Interrogatory ceased to be in the relevant market when they were discontinued. As of the date of this response, the FTC does not know the date on which each discontinued product was discontinued.

With respect to the premium LTE market, the products identified in response to parts (a) and (b) of this Interrogatory ceased to be in the relevant market when subsequent technological advances had reached the point that they were no longer considered for inclusion within flagship

or premium tier handsets. As of the date of this response, the FTC has identified the following subsequent technological advances that impacted whether any of the products identified above was no longer considered for inclusion within flagship or premium tier handsets: increases in uplink/downlink speed, reduced power consumption, and reduced size. As of the date of this response, the FTC does not know the date on which any of the products identified above was no longer considered for inclusion within flagship or premium tier handsets.

(f)

The FTC alleges that Qualcomm has had monopoly power in the CDMA baseband processor market since at least 2006.

The FTC alleges that Qualcomm has had monopoly power in the market for premium LTE baseband processors in commercial use since at least 2012. [redacted]

Interrogatory No. 6

Identify each instance in which you contend that a current, past or potential Qualcomm licensee (i) did not challenge the terms of an existing license agreement with Qualcomm; (ii) did not challenge prospective license terms proposed by Qualcomm; or (iii) agreed to pay a higher royalty than the licensee otherwise would have agreed to pay (including any royalty You contend is not or was not fair, reasonable and non-discriminatory), in each case as a result of a threat by Qualcomm not to supply baseband processors or as a result of any other action taken by Qualcomm regarding the supply of baseband processors, and provide all facts Concerning or supporting Your contention, including whether the licensee was a current licensee, past licensee or potential licensee and the particulars of any threat or other action by Qualcomm and how such action brought about the result You allege.

conditioned on Apple's exclusive use of Qualcomm baseband processors, the various baseband-processor rebates provided to Apple under that agreement were conditioned upon [redacted]

As explained above in response to Interrogatory 7, [redacted]

Interrogatory No. 13

Identify any specific instances in which a rival baseband processor supplier incurred increased costs caused by any conduct of Qualcomm that You contend was anticompetitive, identify the amount of any such increased costs, and provide all facts Concerning or supporting Your response.

The FTC incorporates by reference its General Objections. The FTC specifically objects to this interrogatory to the extent any attempt is made to use the FTC's response to limit its proof at trial. The FTC will continue to receive and review additional information as part of the

ongoing discovery process. Accordingly, the FTC reserves the right to supplement and amend its response following the completion of discovery.

Subject to and without waiving the foregoing general and specific objections, the FTC responds as follows:

Qualcomm conditions sales of its baseband processors to OEMs on the acceptance by the OEM of a patent license that requires the OEM to pay Qualcomm royalties for every cellular handset sold by the OEM. This "no license-no chips" policy has been in place since at least 2006. The no license-no chips policy is embodied in [redacted] The no license-no chips policy has allowed Qualcomm to obtain elevated royalty payments from OEMs, a portion of which reflect Qualcomm's monopoly power in the markets for CDMA and premium LTE baseband processors. The portion of Qualcomm's royalty that is attributable to its market power taxes an OEM when it purchases a baseband processor from a Qualcomm rival. The tax imposed by Qualcomm represents an economic cost to all rival baseband processor suppliers.

Qualcomm's tax has affected every existing or potential baseband processor supplier that has sold or attempted to sell baseband processors to any OEM licensed by Qualcomm. The economic costs of Qualcomm's tax on these rivals has been persistent since at least 2006.

Dated: February 7, 2018

Respectfully submitted,

/s/ Kenneth H. Merber

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Verification of Interrogatory Responses

I, Kenneth Merber, am an attorney in the Bureau of Competition at the Federal Trade Commission. I believe, based on a reasonable inquiry, that the foregoing responses are true and correct to the best of my knowledge.

I verify under penalty of perjury that the foregoing is true and correct.

Dated: February 7, 2018

/s/ Kenneth H. Merber

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REDACTED VERSION OF DOCUMENT(S) SOUGHT TO BE SEALED

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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

FEDERAL TRADE COMMISSION Plaintiff, vs, QUALCOMM INCORPORATED, a Delaware corporation Defendant.	No. 5:17-cv-00220-LHK **QUALCOMM INCORPORATED'S OBJECTIONS AND RESPONSES TO FEDERAL TRADE COMMISSION'S FIRST SET OF INTERROGATORIES**

Pursuant to Federal Rules of Civil Procedure 26 and 34 and the Civil Local Rules of the United States District Court for the Northern District of California, Defendant Qualcomm Incorporated ("Qualcomm") states the following responses and objections ("Responses") to Plaintiff Federal Trade Commission's ("FTC") First Set Of Interrogatories to Qualcomm (the "Requests" or "Interrogatories"), dated January 26, 2018, in the above-captioned action (the "Action").

GENERAL OBJECTIONS

The General Objections set forth below apply to the Interrogatories generally and to the Definitions, Instructions, and the individual Interrogatories set forth therein. Unless otherwise stated, the General Objections shall have the same force and effect as if set forth in full in response to each Definition, Instruction, and Interrogatory. Any undertaking to search for, or provide information in response to, any Interrogatory is made subject to the General Objections.

1. Qualcomm objects generally to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they seek to impose burdens or obligations on Qualcomm that are broader than, inconsistent with, or not authorized under the Federal Rules of Civil Procedure, the Civil Local Rules of the United States District Court for the Northern District of California, other applicable rules or laws, or any order entered by the Court in, or applicable to, this Action (the "Applicable Rules"). Subject to and without waiving any Objections, in responding to the Interrogatories, Qualcomm will construe the Interrogatories in accordance with the Applicable Rules.

2. Qualcomm objects generally to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they request disclosure of information that comes within the scope of the attorney-client privilege, the work-product doctrine, the common interest or joint defense

privilege or any other applicable privilege or immunity, or that otherwise are exempted from disclosure. Qualcomm hereby claims such privileges and protections to the extent implicated by the Interrogatories and excludes privileged or protected information from its Responses to the Interrogatories. Any disclosure of any such privileged or protected information in response to the Interrogatories is inadvertent and not intended to waive those privileges and protections.

3. Qualcomm objects generally to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they purport to require Qualcomm to conduct anything beyond a reasonable and diligent search where responsive information reasonably would be expected to be found (including electronic sources), and to the extent that the Interrogatories purport to require Qualcomm to exceed its obligations under the Applicable Rules.

4. Qualcomm objects generally to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they are vague, ambiguous, overly broad, unduly burdensome, lacking in particularity, unreasonable, or seek the discovery of information that is neither relevant to the claims or defenses of any party to this Action nor reasonably calculated to lead to the discovery of admissible evidence, as well as to the extent that they are unduly burdensome or disproportionate to the needs of the case because they impose a significant expense and inconvenience on Qualcomm. Qualcomm's Responses are based upon (i) a reasonable search and investigation of facilities and files that could reasonably be expected to contain responsive information; and (ii) inquiries of Qualcomm's employees and/or representatives who could reasonably be expected to possess responsive information.

5. Qualcomm objects generally to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they purport to require Qualcomm to draw subjective or legal conclusions, or are predicated on

subjective or legal conclusions or arguments, or call for expert testimony. Subject to and without waiving any objections, Qualcomm states that any response, production of documents or provision of information in response to the Interrogatories is not intended to provide, and shall not constitute or be construed as providing, an admission concerning any of the terms used in the Interrogatories.

6. Qualcomm objects generally to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that the Interrogatories, Definitions or Instructions contain inaccurate, incomplete or misleading descriptions of the facts, persons, relationships and/or events underlying the Action. Qualcomm further object to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they assume the existence of facts that do not exist or the occurrence of events that did not take place. Any response, production of documents or provision of information in response to the Interrogatories is not intended to provide, and shall not constitute or be construed as providing, an admission that any factual predicates stated in the Interrogatories are accurate.

7. Qualcomm objects generally to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that the Interrogatories call for the disclosure of Qualcomm's, its customers', its licensees', its counterparties', or other third parties' confidential, proprietary, trade secret, and/or commercially sensitive information. The provision of such information is made pursuant to the Protective Order Governing Confidential Information, dated May 1, 2017 (Dkt. 81). Where necessary, Qualcomm will endeavor to work with third parties to obtain their consent before identifying or producing such information and/or documents.

8. Qualcomm objects generally to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they seek

information that is cumulative, duplicative, already in the FTC's possession, or equally obtainable from public sources or from some other source or through some other means of discovery that is more convenient, less burdensome, or less expensive.

9. Qualcomm objects generally to the Interrogatories, including the Definitions and Instructions set forth therein, to the extent that they seek information that is not in Qualcomm's possession, custody, or control, or is equally available and/or in the possession, custody, or control of the FTC or any third person or entity.

10. Qualcomm objects generally to the Interrogatories to the extent they seek to compel Qualcomm to generate or create information and/or documents that do not already exist.

11. Qualcomm objects generally to the Interrogatories to the extent they are compound and comprise discrete subparts resulting in separate interrogatories.

12. Qualcomm objects generally to Definition Letter A, defining the terms "You", "Your", "Company" and "Qualcomm", and to Instruction No. 1, as vague, overbroad and, as used in the Requests, calling for materials not relevant to claims or defenses of the parties or not in the possession, custody or control of Qualcomm, to the extent that they encompass Qualcomm's "affiliates", "partnerships and joint ventures" and "consultants", which are not parties to and are irrelevant to this Action, and their "directors, officers, trustees, employees, attorneys, agents, consultants, and representatives". Qualcomm further objects to the extent that it requires Qualcomm to seek information from thousands of people. Unless otherwise stated, Qualcomm will interpret "You", "Your", "Company" and "Qualcomm" to include only Qualcomm Incorporated and its "predecessors, successors, divisions and subsidiaries", including Qualcomm

Technologies Inc. ("QTI"), Qualcomm CDMA Technologies ("QCT"), Qualcomm CDMA Technologies Asia-Pacific Pte. Ltd. ("QCTAP") and Qualcomm Technology Licensing ("QTL").

13. Qualcomm objects generally to Definition Letter D, defining the term "Agreement", as vague, overbroad and, as used in the Requests, calling for materials not relevant to claims or defenses of the parties, to the extent that it includes an "implied contract, arrangement, understanding or plan . . . between two or more persons".

14. Qualcomm objects generally to Definition Letter K, defining the term "Patent", as vague, overbroad and, as used in the Requests, calling for materials not relevant to claims or defenses of either party to this Action to the extent it encompasses provisional, withdrawn, rejected, or abandoned applications. Qualcomm will interpret "Patent" to mean any patent issued in the United States or pending patent application filed in the United States.

15. Qualcomm objects generally to Definition Letter M, defining the term "Premium LTE Baseband Processor" as vague, overbroad, and, as used in the Requests, calling for materials not relevant to claims or defenses of the parties to the extent that it encompasses "any Qualcomm 'MDM' and 'thin modem' Relevant Products of an equivalent or superior 'modem class'" and "any other LTE Relevant Products, whether or not manufactured by Qualcomm, with comparable features (including LTE category and carrier aggregation configuration) such that they are reasonably substitutable for any of the foregoing". Unless otherwise stated, Qualcomm will limit its responses to Relevant Products that support compliance with the LTE standard.

16. Qualcomm objects generally to Definition Letter P, defining the terms "Relating to", "Referring to", "regarding", "concerning" or "about", as vague, overbroad and, as used in the Requests, calling for materials not relevant to

claim or defenses of the parties. Qualcomm further objects generally to Definition Letter P to the extent that it purports to impose obligations greater than those applicable under the Applicable Rules and that are unduly burdensome and not proportional to the needs of the case.

17. Qualcomm objects generally to Definition Letter Q, defining the term "Relevant Product", as vague, overbroad and, as used in the Requests, calling for materials not relevant to claims or defenses of the parties. Qualcomm will interpret "Relevant Product" to mean any component that, when embedded within or connected to Cellular Equipment, is capable of performing modulation and/or de-modulation functions in connection with any portion of any wireless cellular communications transmission.

18. Qualcomm objects generally to Definition Letter R, defining the term "Relevant Standard", as vague, overbroad and, as used in the Requests, calling for materials not relevant to claims or defenses of the parties, including to the extent that it includes terms (such as OFDMA) which are not technological standards. Unless otherwise stated, Qualcomm will limit its response to cellular standards developed or published by one of the relevant SSOs listed in Qualcomm's Objection to Definition Letter S.

19. Qualcomm objects generally to Definition Letter S, defining the term "SSO", as vague, overbroad and, as used in the Requests, calling for materials not relevant to claims or defenses of the parties, including to the extent it encompasses organizations, groups, joint ventures, or consortiums other than the following SSOs: the European Telecommunications Standards Institute ("ETSI"), The Third Generation Partnership Project ("3GPP"), The Third Generation Partnership Project 2 ("3GPP2"), the Alliance for Telecommunications Industry Solutions ("ATIS") and the Telecommunications Industry Association ("TIA").

20. Qualcomm generally objects to the Interrogatories on the grounds that they are not limited in time and therefore are unduly burdensome, not proportional to the needs of the case and call for information that is not relevant to the claims or defenses of any party. To the extent the Interrogatories ask for information from time periods outside the scope of discovery in this case, the Interrogatories are unduly burdensome and not proportional to the needs of the case.

21. Qualcomm's Responses are based on its current knowledge. Further investigation may reveal additional facts or information that could lead to additions to, changes in, and/or variations from the Responses herein. Without in any way obligating itself to do so, Qualcomm expressly reserves the right to supplement, add to, amend, correct, clarify, revise or modify the Responses as further information becomes available. Qualcomm also reserves the right to use or rely on, at any time, subsequently discovered information or information omitted from these Responses as a result of mistake, error, oversight or inadvertence. The responses to the Interrogatories provided herein are based on a reasonable search for responsive information.

22. Qualcomm expressly reserves the right to respond to any or all of the Interrogatories by specifying documents wherein the responsive information may be ascertained pursuant to Rule 33(d) of the Federal Rules of Civil Procedure.

23. Qualcomm is providing these Responses without waiver of or prejudice to (i) its right at any later time to raise objections as to the competence, relevance, materiality, privilege, work product, character and admissibility as evidence, for any purpose, of (a) the Interrogatories or any part thereof, or (b) statements made in this Response to the Interrogatories or any part thereof; or (ii) the right to object to the use of any of the information disclosed hereunder in any subsequent proceedings or the trial of this or any other actions; or (iii) the

and ambiguous, calling for information not relevant to the claims or defenses of any party and disproportionate to the needs of the case. Qualcomm further objects to subparts (a) through (k) on the grounds that they are vague, ambiguous, overly broad, unduly burdensome and impose burdens on Qualcomm that are disproportionate to the needs of the case. Qualcomm further objects to Interrogatory No. 3 on the ground that it seeks to elicit information subject to and protected by the attorney-client privilege, the attorney work product doctrine and/or any other applicable privilege or immunity, including an identification of and information concerning the "highest-rated" patents. *See* Supplemental Discovery Order Granting Qualcomm's Asserted Privilege, dated November 13, 2017 (Dkt. 290). Qualcomm will not respond to Interrogatory Number 3 on these bases.

INTERROGATORY NO. 4:

State whether You contend that "no company can match the breadth, quality, or value of Qualcomm's cellular patent portfolio" and provide all measures, including quantitative, that support such a contention.

Response to Interrogatory No. 4

Qualcomm incorporates its General Objections herein. Qualcomm further objects to Interrogatory No. 4 on the grounds that it prematurely calls for expert testimony or opinions at this stage of litigation and because the request for "all measures, including quantitative" is vague and ambiguous.

Subject to and without waiving the foregoing General Objections and Specific Objections, Qualcomm responds as follows:

As a result of Qualcomm's longstanding, leading, and continuing role in developing the fundamental technologies of cellular communications, Qualcomm has the largest and most important portfolio of patents relating to cellular communications. In its fiscal year 2016, Qualcomm invested [redacted] in

R&D, which represents approximately [redacted] of its revenue for that year. In fiscal year 2017, Qualcomm invested [redacted] in R&D, which represents approximately [redacted] of its revenue for that year. Since its founding, Qualcomm has invested over [redacted] in R&D. As of February 2018, Qualcomm had over 86,000 granted patents worldwide, and over 53,000 pending patent applications worldwide. As a result of its R&D investments and efforts, Qualcomm's patent portfolio continues to grow at a rapid pace. Qualcomm's overall patent portfolio has a compound annual growth rate of [redacted] for the last 20 years. In 1990, when Qualcomm signed its first license agreements, it had nine patents. In 1999, the year that the WCDMA standard was adopted, Qualcomm received 510 patents. In 2015 alone, Qualcomm obtained nearly 9,000 new patents. In addition, Qualcomm's fundamental contributions created enormous value for all participants in the cellular ecosystem, including, but not limited to, carriers, handset makers, app developers and end users.

To date, Qualcomm has entered into license agreements with over three hundred companies. The terms of these license agreements were established by market factors and reflect the value that each licensee and the industry has placed on Qualcomm's patent portfolio as established through arms-length negotiations with sophisticated counterparties.[1]

That the terms of Qualcomm's license agreements reflect the value of its patent portfolio is confirmed by the fact that Qualcomm licensees who do not purchase baseband processor products from Qualcomm, or who entered into license agreements even before Qualcomm supplied baseband processor products, have agreed on comparable terms as those who do purchase baseband processors

[1] Qualcomm has entered into over [redacted] Chinese Patent License Agreements, the terms of which (including the royalty rate) have been recognized by the NDRC as satisfying the NDRC Order dated February 9, 2015.

from Qualcomm. Qualcomm entered into at least [redacted] license agreements [redacted]

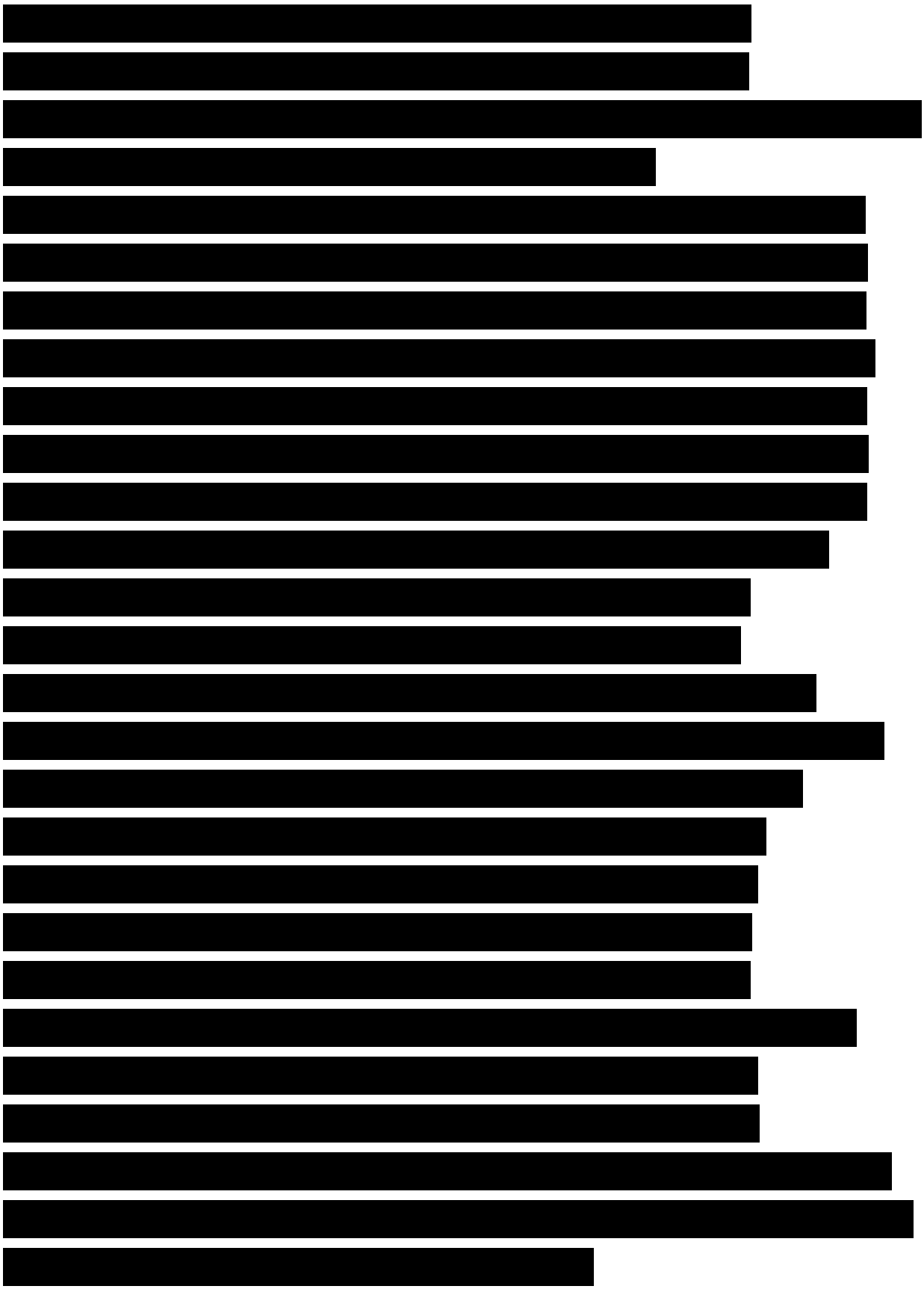
[redacted]

Qualcomm also has license agreements with over [redacted] companies [redacted]

[redacted]

Qualcomm's typical patent license terms have been known in the industry, and by specific SSO participants, since before Qualcomm's technology has been included in the relevant standards. Qualcomm has never increased its royalty rates for a particular technology after that technology was incorporated into a cellular standard.

Pursuant to Federal Rule of Civil Procedure 33(d), Qualcomm also identifies the following documents that include facts responsive to this Interrogatory: Qualcomm's submissions to the FTC during its pre-Complaint investigation; [redacted]



INTERROGATORY NO. 5:

Identify every Premium LTE Baseband Processor that Qualcomm has supplied and every Premium LTE Baseband Processor that "other manufacturers have offered" (as that phrase is used in Qualcomm's Answer ¶ 45) and for each such Premium LTE Baseband Processor, provide the following information: (a) the manufacturer; (b) all customers or prospective customers the Premium LTE Baseband Processor was offered to; and (c) the handset, or other end-use, the Premium LTE Baseband Processor was offered for use in.

Response to Interrogatory No. 5

Qualcomm incorporates its General Objections herein. Qualcomm further objects to Interrogatory No. 5 on the grounds that it prematurely calls for expert testimony or opinions at this stage of litigation. Qualcomm further objects to the term "Premium LTE Baseband Processor" (including as defined) as vague and ambiguous. Qualcomm further objects on the grounds that its Answer (including at Paragraph 45) does not state that "other manufacturers have offered" Premium LTE Baseband Processors, but instead states that other manufacturers have offered baseband processors that support compliance with the LTE standard, and that to date, FTC has refused to define the contours of the alleged "premium LTE baseband processor" market. Qualcomm further objects that "premium" is an imprecise descriptive term with uncertain meaning as used in the cellular industry, including at times internally by Qualcomm, but that the term does not define a fixed category of baseband processor chips with a particular set of characteristics. Qualcomm further objects to the extent that Interrogatory No. 5 requests information concerning manufacturers other than Qualcomm and concerning which customers or prospective customers such other manufacturers have offered their products to, which information is not in Qualcomm's possession and which the FTC has had at least the same ability as Qualcomm to obtain from such

manufacturers through its pre-Complaint investigation and discovery in this Action.

Subject to and without waiving the foregoing General Objections and Specific Objections, Qualcomm responds as follows:

In accordance with Rule 33(d) of the Federal Rules of Civil Procedure, Qualcomm states that it has produced documents to the FTC from which the requested information about baseband processors, to the extent that it is in Qualcomm's possession, can be derived. The burden of deriving such information from those documents would be substantially the same for the FTC as it would be for Qualcomm. Specifically, Qualcomm has produced [redacted]

INTERROGATORY NO. 6:

Identify every CDMA Baseband Processor that Qualcomm has supplied and every CDMA Baseband Processor any other manufacturer has offered, including

any CDMA Baseband Processors that "Via has offered" (as that phrase is used in Qualcomm's Answer ¶ 34) or that "MediaTek offers" (as that phrase is used in Qualcomm's Answer ¶ 35), and for each such CDMA Baseband Processor, provide the following information: (a) the manufacturer; (b) all customers or prospective customers the CDMA Baseband Processor was offered to; and (c) the handset, or other end-use, the CDMA Baseband Processor was offered for use in.

Response to Interrogatory No. 6

Qualcomm incorporates its General Objections herein. Qualcomm further objects to Interrogatory No. 6 on the grounds that it prematurely calls for expert testimony or opinions at this stage of litigation. Qualcomm further objects to the extent that Interrogatory No. 6 requests information concerning manufacturers other than Qualcomm and concerning which customers or prospective customers such other manufacturers have offered their products to, which information is not in Qualcomm's possession and which the FTC has had at least the same ability as Qualcomm to obtain from such manufacturers through its pre-Complaint investigation and discovery in this Action.

Subject to and without waiving the foregoing General Objections and Specific Objections, Qualcomm responds as follows:

In accordance with Rule 33(d) of the Federal Rules of Civil Procedure, Qualcomm states that it has produced documents to the FTC from which the requested information about baseband processors, to the extent that it is in Qualcomm's possession, can be derived. The burden of deriving such information from those documents would be substantially the same for the FTC as it would be for Qualcomm. Specifically, Qualcomm has produced [redacted]

[redacted]

INTERROGATORY NO. 7:

Identify every Agreement between Qualcomm and a Qualcomm Licensee or other manufacturer of Cellular Equipment involving [redacted]

Response to Interrogatory No. 7

Qualcomm incorporates its General Objections herein. Qualcomm also objects to Interrogatory No. 7 as vague, ambiguous, overly broad, and/or unduly burdensome, in particular with regard to its use of the phrase [redacted] Qualcomm objects to this interrogatory to the extent that it seeks information that

is protected by the attorney-client privilege, work product doctrine, and/or other applicable privilege or protection.

Subject to, and without waiving the General Objections and Specific Objections, Qualcomm responds as follows:

In accordance with Rule 33(d) of the Federal Rules of Civil Procedure, Qualcomm states that it has produced or will produce documents to the FTC from which the requested information can be derived. The burden of deriving such information from those documents would be substantially the same for the FTC as it would be for Qualcomm.

[redacted]

INTERROGATORY NO. 8:

For each Relevant Standard to which Qualcomm has contributed Standard

Essential Patents, state and quantify, including in numerical terms, together with all factual and legal bases for Your contentions: (a) what Qualcomm contends is the highest fair and reasonable total aggregate royalty for all Standard Essential Patents (including those contributed by Qualcomm and those contributed by others) for a handset that complies with the standard; (b) what Qualcomm contends is the proportional value of the Standard Essential Patents contributed by Qualcomm to the standard in relation to value of all Standard Essential Patents that are essential to the standard; and (c) the metrics, assessment methods, or other measures of value used by Qualcomm to reach such value.

Response to Interrogatory No. 8

Qualcomm incorporates its General Objections herein. Qualcomm further objects to Interrogatory No. 8 on the ground that it is vague and ambiguous, including its use of the terms "highest fair and reasonable total aggregate royalty" and "proportional value". Qualcomm further objects to Interrogatory No. 8 on the ground that it prematurely calls for legal conclusions. Qualcomm further objects to Interrogatory No. 8 on the grounds that it prematurely calls for expert testimony or opinions at this stage of litigation.

Qualcomm further objects to Interrogatory No. 8 on the grounds that it is overly broad and unduly burdensome to the extent it requests Qualcomm to analyze every Standard Essential Patent ever issued in any country to any entity for multiple standards. Qualcomm further objects to Interrogatory No. 8 on the ground that Qualcomm does not contend that there is a "highest" or maximum total aggregate fair and reasonable royalty for all Standard Essential Patents (including those contributed by Qualcomm and those contributed by others) for a handset that complies with a standard, or that such "highest fair and reasonable total aggregate royalty" must be divided proportionally among Standard Essential Patents (or their holders). To the contrary, major SSOs (including ETSI) have

rejected both (i) a proposed cap on cumulative royalties and (ii) a rule requiring proportional allocation (for example based on the number of declared SEPs held by each patent holder). *See, e.g.*, ETSI GA/IPR01(06)08 ("Proposal for IPR Reform"); ETSI GA/IPR02(06)02 ("Consolidated Discussion in E1—FRAND"); ETSI/B59(06)28 ("IPR Review Ad Hoc Group Report"); ETSI GA/IPRR06(06)24 rev. 3 ("Secretary's Notes from IPRR#6"). Such requirements are not included in the IPR Policy of ETSI or the policies of the other SSOs listed in Qualcomm's Objection to Definition Letter S.

Qualcomm further objects to Interrogatory Number 8 because Qualcomm does not contend that any "fair and reasonable total aggregate royalty" would be subject to a numerically "proportional" split among SEP holders, as such proposition fails to account for cross-grants, overlapping license arrangements and other unique circumstances that negate simple aggregation of royalty rates, as well as the many non-pecuniary terms that affect the rate provided by any agreement; all of these factors may be relevant to the assessment of whether any particular license agreement was entered into on fair and reasonable terms, even if the relevant terms do not reflect a numerical "proportional" split among SEP holders.

The value of SEPs, like any other asset, is determined by market forces through bilateral arms' length negotiation, not the arbitrary assessment of a conceptual "total aggregate royalty". Just like there is no theoretical "highest" aggregate price for all tangible components of a mobile handset, there neither is nor should be a theoretical "highest" price for the intellectual property a mobile handset implements.

To the extent that the FTC contends that there is a "highest fair and reasonable total aggregate royalty" that should be "proportional[ly]" allocated among SEP holders in any way, Qualcomm reserves the right to rebut such

Qualcomm has produced [redacted]

INTERROGATORY NO. 13:

State whether You contend that "[i]f Qualcomm tried to charge supra-competitive prices for its CDMA modem chips, its customers could 'discipline' Qualcomm by shifting their demand for non-CDMA modem chips to other chip suppliers," and provide all factual and legal bases for Your contention, including every example of such an occurrence, or the possibility of such an occurrence, impacting the terms on which Qualcomm offered to sell CDMA Baseband Processors.

Response to Interrogatory No. 13

Qualcomm incorporates its General Objections herein. Qualcomm further objects to Interrogatory No. 13 on the grounds that it prematurely calls for expert testimony or opinions at this stage of litigation. Qualcomm further objects on the ground that the request for "every example of such an occurrence, or the possibility of such an occurrence" is vague and ambiguous and imposes burdens on Qualcomm that are disproportionate to the needs of the case.

Subject to and without waiving the foregoing General Objections and Specific Objections, Qualcomm responds as follows:

Qualcomm's CDMA modem customers can use their significant purchases of non-CDMA modem chips to discipline prices for CDMA modem chips. The vast majority of phones sold in the world are not CDMA-enabled and do not contain CDMA Baseband Processors. Even in the regions of the world where sales of phones with CDMA modem chips occur, original equipment manufacturers still sell significant numbers of phones that do not contain CDMA modem chips. Nearly all of Qualcomm's top customers of CDMA modem chips purchase a substantially greater number of non-CDMA modem chips from Qualcomm. As a result, customers for CDMA chip modems could defeat any attempt by Qualcomm to impose a significant price increase on CDMA-enabled chips by threatening to move their non-CDMA modem chip purchases to other manufacturers.

For example, suppose Qualcomm sought to impose a significant price increase on CDMA modem chips. Even if it were the case that OEMs could not shift any of their CDMA modem chip purchases to other chipmakers, Qualcomm's potential gain would be equal to the revenues generated by the price increase. On the other hand, Qualcomm's potential loss if a chipmaker moved its non-CDMA chip purchases to another chipmaker or engaged in self-supply would be

Qualcomm's entire profit margin on the sale of chips that were moved to another chipmaker or self-supplied. Because Qualcomm's potential loss could be greater than its potential gain in such a situation, OEMs could discipline the price of CDMA chip modems by threatening to move non-CDMA chip modem purchases to other chipmakers or by self-supplying. Further, OEMs that do not purchase non-CDMA modem chips from Qualcomm could offer to move such purchases to Qualcomm as leverage to obtain lower prices for Qualcomm CDMA modem chips.

In accordance with Rule 33(d) of the Federal Rules of Civil Procedure, Qualcomm has produced documents to the FTC from which the requested information may be derived. The burden of deriving such information from those documents would be substantially the same for the FTC as it would be for Qualcomm. Specifically, Qualcomm has produced [redacted]

[redacted]

INTERROGATORY NO. 14:

Identify each Qualcomm License that You contend provides less consideration to Qualcomm than the fair value of the Licensed patent rights, and for each such License, state: (a) whether You contend that Qualcomm could have successfully demanded a higher royalty from the Licensee at the time of negotiation, and (b) whether You contend the Licensee would agree to a higher royalty today than it did at the time of negotiation, and provide all factual bases for Your contentions.

Response to Interrogatory No. 14

Qualcomm incorporates its General Objections herein. Qualcomm further objects to Interrogatory Number 14 on the ground that it requests information that is not relevant to the claims or defenses of the parties, including because it is unclear why and how whether Qualcomm contends that any Qualcomm License "provides less consideration to Qualcomm than the fair value of the Licensed patent rights" is relevant to the claims or defenses of a party. Qualcomm further objects on the ground that Interrogatory Number 14 is overly broad and imposes burdens on Qualcomm that are disproportionate to the needs of the case, including because it requests Qualcomm to evaluate market conditions, Qualcomm's patent portfolio and the negotiating conditions that existed at the times each of over 300 licenses were entered into. Qualcomm further objects on the ground that the requests for whether Qualcomm could have "demanded a higher royalty" or whether each Licensee "would agree to a higher royalty today" are vague and

ambiguous, including on the basis that the consideration Qualcomm received from each license comprises more than just a royalty. Qualcomm further objects to Interrogatory Number 14 on the grounds that it poses an impermissible hypothetical question and that it seeks expert testimony or opinions, which is premature at this stage of the litigation. Qualcomm will not respond to Interrogatory Number 14 on these bases.

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