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**UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON, D.C.**

In the Matter of

CERTAIN ELECTRONIC DEVICES,
INCLUDING WIRELESS COMMUNICATION
DEVICES, PORTABLE MUSIC AND DATA
PROCESSING DEVICES, AND TABLET
COMPUTERS

Investigation No. 337-TA-794

**RESPONDENT APPLE INC.'S WRITTEN SUBMISSION REGARDING THE COMMISSION'S
QUESTIONS ON THE ISSUES UNDER REVIEW, AND ON REMEDY, BONDING, AND THE
PUBLIC INTEREST**

(77 Fed. Reg. 70464 (Nov. 26, 2012))

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INTRODUCTION

The Administrative Law Judge properly found no Section 337 violation in this investigation, in which Samsung's ever-changing theories fell far short of proving infringement of any valid patent. Questions 8-13 in the Notice of Commission Determination to Review the Initial Determination address technical issues. As explained in our responses herein, Apple believes that the answers to those questions further confirm that the ALJ was correct to find no violation on substantive patent grounds.

The Commission's questions 1-7, however, address "fair, reasonable, and non-discriminatory" ("FRAND") licensing issues as to which the ALJ's analysis was, respectfully, incorrect. As Apple demonstrated at the hearing and discussed herein, FRAND requirements are a critical safeguard against abuse of the process of setting "standards." Standards serve the function of enabling interoperability of products made by various companies. But standards create the risk of "hold up" in which parties that claim to own patents covering parts of standards demand exorbitant compensation in return for license rights—or, even worse, seek to use such patents to exclude products entirely from the market. FRAND is a bulwark against such abuse.

Here, Samsung has ignored its FRAND obligations by asserting two allegedly standard-essential patents (the '348 and '644 patents) in pursuit of a Commission exclusion order, and by demanding non-FRAND royalties from Apple. Under proper application of the statutory public interest factors, Apple respectfully submits that the Commission cannot enter an exclusion order for the two allegedly standard-essential Samsung patents. The ALJ's Initial Determination, however, incorrectly analyzed the nature and effect of FRAND commitments.

Thus, if the Commission finds a violation—and Apple submits it should not—this case presents an opportunity for the Commission to provide clarifying guidance as to the Commission's positions on the critical issue of the compatibility of FRAND and exclusionary remedies. This issue has attracted recent scrutiny from the Department of Justice, the Federal Trade Commission, the courts, and members of Congress. The Commission, respectfully, should recognize the critical distinction between (1)

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FRAND, allegedly standard-essential, non-product differentiating patents—which are not a proper basis for exclusionary remedies and (2) non-FRAND, non-standard-essential, product-differentiating patents—which can be a proper basis for exclusionary remedies. (In the co-pending 796 Investigation, Apple has asserted only the second category of patents.)

In this submission, Apple first addresses the specific questions enumerated by the Commission in its Notice. In the course of answering the FRAND-related questions, Apple specifically analyzes the public interest factors, *see pp. 6-10 infra*. After providing responses to the Commission’s questions and analysis of the public interest, Apple concludes by discussing the issues of remedy and bonding.

Apple respectfully requests that the Commission find no Section 337 violation, for the reasons set forth below and in the ALJ’s Initial Determination finding the patents invalid, not infringed, or not supported by the required domestic industry. If the Commission finds a violation, Apple submits that the Commission should decline to impose any remedy, as contrary to the public interest factors implicated by the FRAND issues in this case.

I. RESPONSES TO COMMISSION’S QUESTIONS AND ANALYSIS OF THE PUBLIC INTEREST

QUESTION 1. Does the mere existence of a FRAND undertaking with respect to a particular patent preclude issuance of an exclusion order based on infringement of that patent? Please discuss theories in law, equity, and the public interest, and identify which (if any) of the 337(d)(1) public interest factors preclude issuance of such an order.

RESPONSE:

Yes. The existence of a FRAND obligation precludes issuance of an exclusion order, other than in the exceptional scenarios such as where a potential licensee has refused to pay a royalty after a U.S. court has determined that royalty to be FRAND, or where no U.S. court has jurisdiction over the potential licensee in order to set a FRAND rate.

To answer this question fully, in the discussion below Apple places FRAND within the larger context of standard setting; describes the specific FRAND policy of the European Telecommunications

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Standards Institute (“ETSI”); reviews the harm to the statutory public interest factors that would result from allowing exclusionary remedies on FRAND patents; and explains the alternative relief available to FRAND patent holders.

A. The Standard-Setting Context For FRAND Commitments

Understanding FRAND requires understanding standard setting. Standard setting is the collective, often industry-wide development of technical specifications for products. These specifications enable one company’s products to interoperate with another company’s.

Standard setting can, when appropriately governed by prophylactic rules preventing “hold-up” and other problems, offer “significant procompetitive advantages” by pooling expertise among industry participants to reach consensus on technical solutions that are equally available to all. *Allied Tube & Conduit Corp. v. Indian Head, Inc.*, 486 U.S. 492, 501 (1988). Because it involves coordinated conduct among industry participants, however, standard setting requires safeguards to ensure it is “based on the merits of objective expert judgments” and not “biased by members with economic interests in stifling product competition.” *Id.* at 500-01.

Absent proper safeguards, standard setting has serious potential for anticompetitive harm because “[b]y its nature, standard setting displaces the competitive process through which the purchasing decisions of customers determine which interoperable combinations of technologies and products will survive.” *In the Matter of Rambus, Inc.*, No. 9302, 2006 WL 2330117, at *2 (F.T.C. Aug. 2, 2006); *see also Allied Tube*, 486 U.S. at 500 (“Agreement on a product standard is, after all, implicitly an agreement not to manufacture, distribute, or purchase certain types of products.”); *Research In Motion Ltd. v. Motorola, Inc.*, 644 F. Supp. 2d 788, 796 (N.D. Tex 2008) (“[S]tandards, without the proper safeguards, are inherently anticompetitive.”).

This is a function of the economics of standard setting. When alternative technologies compete before a standard is adopted, the price for each is constrained by its rivals—*i.e.*, they are substitutable. In addition, the standard-setting body can determine not to standardize at all the function performed by

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technologies under consideration—and instead allow the alternative technologies to continue to compete to perform that function. Once the standard has been set, however, the competitive dynamic changes as industry participants start to design, test, and produce goods that conform to the standard and the technologies incorporated in the standard. The amount of resources the industry commits to the standard naturally increases over time, as do the costs of switching.

As a result, the industry is “locked” into the chosen standard, and holders of patents allegedly covering the standardized technology gain the power to “hold up” standard implementers by demanding supracompetitive prices or refusing to license their standard essential patents altogether. *See Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297, 310 (3rd Cir. 2007); Third Party United States Federal Trade Commission’s Statement on the Public Interest at 2-3, Inv. No. 337-TA-745, June 6, 2012, Doc. ID 482234 (“FTC 745 Statement”). “[O]nce a patent becomes essential to a standard, the patentee’s bargaining power surges because a prospective licensee has no alternative to licensing the patent; he is at the patentee’s mercy.” *Apple Inc. v. Motorola, Inc.*, --- F. Supp. 2d ---, 2012 WL 2376664, at *11 (N.D. Ill. June 22, 2012) (Posner, J., sitting by designation).

This is particularly true in the cellular industry, where standards are critically important. As Dr. Michael Walker, former Chairman of the Board of ETSI—which helped developed the standards at issue in this case—testified at the hearing, standards allow the various aspects of a cellular network (network base stations and mobile cellular devices) to interoperate without regard to the manufacturer. (Tr. [Walker] at 1326:9-25.) This ability to interoperate on a widely-deployed, common network creates a stable platform on which all industry participants can offer competitive products—but also creates the risk of bad actors holding up companies that introduce cellular products, using declared-essential patents as weapons.

The FRAND requirement serves the vital purpose of committing the declarant to refrain from exploiting the “hold-up” power that standardization would otherwise convey. As the Third Circuit has observed: “To guard against anticompetitive patent hold-up, most SDOs require firms supplying essential

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technologies . . . to commit to licensing their technologies on FRAND terms.” *Broadcom*, 501 F.3d at 313. The European Commission likewise has stated: “The concept of FRAND has been developed in an attempt to limit the ability of SEP [standard-essential patent] holders to abuse their market power and to provide effective access to the standard for all interested third parties.” Case No. COMP/M.6381 – *Google/Motorola Mobility* Commission decision pursuant to Art. 6(1)(b)¶ 113.

A critical consequence of FRAND is that it precludes the patent holder from seeking to exclude others from the market for standardized technologies—and thereby holding them up. This is discussed below in the specific context of ETSI’s FRAND rules.

B. ETSI’s IPR Policy

ETSI’s Intellectual Property Rights (“IPR”) Policy encourages essential patent holders to make an irrevocable FRAND commitment to license any implementer of the relevant standard on fair, reasonable, and non-discriminatory terms. This commitment limits the patent holder to *monetary* compensation rather than exclusionary remedies.

As Dr. Walker explained, under ETSI’s rules, the FRAND commitment involves a carefully tailored bargain. What the patent holder *gets* is having its IPR incorporated in the standard—and thus the opportunity to receive FRAND royalties from all implementers of the standard. That opportunity can instantly transform the value of IPR, providing access to a mass global market and potential high-volume royalties. (Tr. [Walker] at 1349:3-22.)

What the IPR holder *gives up* for this commercial opportunity is the right to do anything but license its IPR for FRAND royalties; this is a relinquishment of any right the patent holder might otherwise have to preclude competitors and other standard implementers from using that IPR. (Tr. [Walker] at 1349:23-1350:8.)

Although the ETSI IPR Policy does not expressly forbid injunctions, the Policy makes clear that such a step is incompatible with making the FRAND bargain to license to all interested parties:

Q. Now, Dr. Walker, does the ETSI IPR policy specifically say no injunctions?

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A. No, the ETSI IPR policy does not address issues like injunctions. It does not explicitly say no injunction. What it does say, though, is that the purpose of the, of the way you do secure your IPR, protect your IPR within ETSI is to seek a license with anyone who wishes to implement the standard under FRAND terms. So it is all about seeking a license, not preventing use of IPR, which an injunction is at the end of the day.

(Tr. [Walker] at 1350:9-20; *see also* RX-710 [ETSI IPR Policy] at Clause 6.1 & Policy Objectives.) *See also, e.g., Apple*, 2012 WL 2376664, at *12 (characterizing agreement “to license . . . standard-essential patents on FRAND terms as a *quid pro quo* for their being declared essential to the standard”).

When a FRAND patent holder seeks an injunction, it upsets the FRAND bargain—and harms the public interest, as discussed in the next section.

C. The Potential Harm To The Public Interest

The Commission is required to consider, pursuant to 19 U.S.C. § 1337(d)(1), the public interest implications of an exclusion order, and FRAND commitments will always—save in the exceptional scenarios of a refusal to pay a FRAND royalty or where no U.S. court has jurisdiction over the defendant—compel a conclusion that the public interest would be harmed by an exclusion order. The specific public interest factors enumerated in the statute that require this conclusion include (1) “competitive conditions in the United States economy”; (2) “the production of like or directly competitive articles in the United States”; and (3) effects on “United States consumers.” 19 U.S.C. § 1337(d)(1). These statutory public interest factors are legal in nature, but overlap significantly with traditional equitable considerations governing injunctions. *Compare eBay Inc. v. MercExchange L.L.C.*, 547 U.S. 388 (2006) (reviewing equitable factors that govern injunctions).

As discussed in detail below, the Federal Trade Commission, the Department of Justice, courts, and members of Congress have criticized the use of FRAND patents as a basis for exclusionary remedies—including ITC exclusion orders—based on precisely the public interest considerations that the Commission must consider under Section 337. These various institutions and individuals have recognized the severe costs imposed by patent hold-up. Indeed, Samsung itself joined an amicus brief to the FTC advocating patent unenforceability where a standard-setting participant has engaged in hold-up:

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“when a patent owner subverts an SSO and misuses patent rights to hold-up a standard, the appropriate remedy is to bar the patent owner from enforcing its patent rights against the affected standard.” (Brief of Amici Curiae Nvidia Corp., Micron Tech. Inc., Samsung Elecs. Corp., and Hynix Semiconductor, Inc. on the Issue of the Appropriate Remedy for Rambus’s Violations of the FTC Act, *In the Matter of Rambus, Inc.*, No. 9302 (Federal Trade Commission Sept. 15, 2006) at 4, *available at* <http://www.ftc.gov/os/adjpro/d9302/060915nvidiaetalamicibrief.pdf>).

The basic problem is this: if FRAND patent holders could obtain ITC exclusion orders, then *every* holder of *any* standard-essential patent—and for ETSI standards, there are thousands of declared-essential patents, held by dozens of companies¹—could threaten standards implementers with the prospect of not being able to import any standards-compliant products into the United States market. This hold-up threat could force some implementers to pay artificially high royalties to avoid this extreme outcome. The dead-weight economic loss of paying such royalties would reduce these companies’ resources for investments in research, design, and supply of products. Other implementers might decide the cost is simply too high, and forego product development and sales altogether. This will inhibit competitive conditions in the United States economy and reduce production of like or directly competitive articles. Fewer wireless-communications devices would be available, at higher prices (which would follow inevitably from a lower supply), and at lower levels of quality and innovation. Facing fewer choices, lower quality, and higher prices, United States consumers would suffer in this diminished marketplace.²

¹ See Tr. [Walker] at 1342:23-1343:5 (“if you look in the ETSI database, there are thousands of patents that have been registered or disclosed as essential to UMTS”); Fairfield Resources International, Inc., *Review of Patents Declared Essential to LTE and SAE (4G Wireless Standards) Through June 30, 2009*, January 6, 2010, *available at* <http://www.frlicense.com/LTE%20Final%20Report.pdf> (“The lists of patents and patent applications declared as essential to LTE or SAE [two fourth generation cellular technology standards] compiled by ETSI contains more than 1100 distinct entries declared as of June 30, 2009.”).

² The public interest in innovation and robust competition threatened by patent holdup is not limited to physical *devices* that support industry standards. Patent holdup also chills robust innovation for *technologies* (the concepts themselves) to be incorporated into industry standards. If patent holders could use exclusionary relief to hold up standard implementers and thereby raise the costs of producing standard-compliant products, that would suppress broad adoption of the standard and constrain the

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This is not Apple’s view alone. Samsung’s (and certain other companies’) attempts to use FRAND patents as a hold-up mechanism have drawn the scrutiny of regulators, courts, and members of Congress.³ The United States Department of Justice has opened an investigation into Samsung’s conduct with respect to declared-essential patents. The Federal Trade Commission issued a report⁴ last year on the implications of declared-essential patents for competition policy and recently made a public interest submission in the 745 investigation, expressing serious concerns with the use of declared-essential patents to obtain exclusion orders. In its 745 submission, the FTC stated: “ITC issuance of an exclusion or cease and desist order in matters involving RAND-encumbered SEPs [standards-essential patents] . . . has the potential to cause substantial harm to U.S. competition, consumers and innovation.”⁵ FTC 745 Statement at 1. The European Commission has also opened investigations into Samsung’s and Motorola’s use of declared-essential patents, focusing on the hold-up threat from injunctions.

customer base for technology licensing. This, in turn, would reduce the returns on technology innovation in the United States (and elsewhere), thereby directly harming the vast domestic industry for technology innovation and competitive conditions in the United States.

³ On July 11, 2012, the Senate Committee on the Judiciary convened a hearing regarding “Oversight of the Impact on Competition of Exclusion Orders to Enforce Standard-Essential Patents.” On July 18, 2012, the House Committee on the Judiciary conducted a hearing on “The International Trade Commission and Patent Disputes” that addressed whether exclusion orders are appropriate for declared-essential patents. Six Senators—including the Chairman and the Ranking Member of the Subcommittee on Antitrust, Competition Policy and Consumer Rights—submitted a letter in the 745 Investigation stating that “[a]ny precedent that would enable or encourage companies to . . . commit to license . . . patents on RAND terms, and then seek to secure an exclusion order despite a breach of that commitment would . . . implicate significant policy concerns.” Letter from Senator Kohl *et al.*, Inv. No. 337-TA-745, June 19, 2012, Doc. ID 484039.

⁴ Federal Trade Commission, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* at 22 (Mar. 2011) (“Evolving IP Marketplace”).

⁵ Similar points were made by industry participants in other submissions in the 745 Investigation: Comment on the Public Interest by AT&T, June 8, 2012, Doc. ID 482441; Comment in Response to the Request for Statements on the Public Interest by Cisco Systems, Inc., June 7, 2012, Doc. ID 482396; Comments on the Public Interest by Microsoft Corporation, June 6, 2012, Doc. ID 482241; Comments on the Public Interest by Nokia Corporation, June 6, 2012, Doc. ID 482247; Comments on the Public Interest by Business Software Alliance, June 6, 2012, Doc. ID 482232; Comments on the Public Interest by Hewlett-Packard Company, June 6, 2012, Doc. ID 482215; Comments Retail Industry Leaders Association, June 6, 2012, Doc. ID 482212.

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Less than a week ago, the FTC acted on the policies expressed in its submission in the 745 investigation by bringing an enforcement action under Section 5 of the FTC Act in *In the Matter of Bosch GMBH*. The FTC acted in response to SPX, a company that Bosch had acquired, seeking injunctive relief on two patents it had declared essential to an industry standard. The FTC stated that “SPX’s suit for injunctive relief against implementers of its standard essential patents constitutes a failure to license its standard-essential patents under the FRAND terms,” and observed that “[s]eeking injunctions against willing licensees of FRAND-encumbered standard essential patents . . . is a form of FRAND evasion and can reinstate the risk of patent hold-up that FRAND commitments are intended to ameliorate.” Analysis of Agreement Containing Consent Order to Aid Public Comment at 4, *In re Robert Bosch GmbH*, F.T.C. File No. 121-0081 (F.T.C. Nov. 26, 2012), *all Bosch filings available at* <http://www.ftc.gov/os/caselist/1210081/>. Regarding competitive harm to US markets, the FTC stated that threatening injunctions based on FRAND-committed patents “can harm incentives to develop standard-compliant products” and “lead to excessive royalties that can be passed along to consumers in the form of higher prices.” Statement of the Federal Trade Commission at 2, *In re Robert Bosch GmbH*, F.T.C. File No. 121-0081 (F.T.C. Nov. 26, 2012). The FTC concluded that SDX’s conduct in seeking injunctions based on FRAND-committed patents constituted “an unfair method of competition in or affecting commerce” in violation of Section 5 of the FTC Act. Complaint ¶ 20, *In re Robert Bosch GmbH*, F.T.C. File No. 121-0081 (F.T.C. Nov. 26, 2012).

Also within the last few months, the FTC’s reasoning in its submission in the 745 Investigation was endorsed and adopted by Judge Richard Posner, who flatly rejected the possibility of an injunction for patents subject to FRAND commitments—explaining that the FTC’s logic in the context of ITC exclusion orders “embraces any claim to enjoin the sale of an infringing product.” *Apple Inc. v. Motorola, Inc.*, --- F. Supp. 2d ---, 2012 WL 2376664, at *12 (N.D. Ill. June 22, 2012) (Posner, J., sitting by designation); *see also Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 885 (9th Cir. 2012) (“Implicit in such a sweeping promise is, at least arguably, a guarantee that the patent-holder will not take steps to

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keep would-be users from using the patented material, such as seeking an injunction, but will instead proffer licenses consistent with the commitment made.”); *Microsoft Corp. v. Motorola, Inc.*, --- F.Supp.2d ---, 2012 WL 1669676, at *10 (W.D. Wash. May 14, 2012) (“[A] negotiation where [the licensor] must either come to an agreement or cease its sales throughout the country . . . fundamentally places that party at a disadvantage.”).

Here, Samsung is engaging in just the sort of conduct that the FTC—an expert competition authority that the Commission is required, under 19 U.S.C. § 1337(b)(2), to “consult with, and seek advice and information from” during the course of an investigation—criticized in the 745 Investigation and found to constitute an “unfair method of competition” in the *Bosch* matter. When Samsung made its FRAND commitments to ETSI, it irrevocably promised to license to any and all implementers of the UMTS standard in return for FRAND royalties. It has now broken that promise by seeking to exclude from the U.S. market Apple products that support the UMTS standard, causing the very type of harm to U.S. domestic markets that the FTC described in *Bosch*. For the Commission to abet Samsung’s unlawful conduct by ordering exclusionary relief would bring destructive effects to competitive conditions in the U.S. domestic market and manifestly contravene the public interest factors of Section 337.

D. The Alternative Remedies That FRAND Patent Holders Have Elected

Precluding exclusionary remedies for FRAND patent holders would not leave them without a remedy—it would simply leave them without an ITC (or injunctive) remedy, except in exceptional scenarios such as where the proposed respondent had previously refused to comply with a FRAND royalty determined by a U.S. court or where no U.S. court has jurisdiction over the potential licensee to decide a FRAND royalty. In the ordinary course, the patentee’s remedy would be money, in the form of FRAND royalties. This is consistent with the FRAND commitment itself, which involves the irrevocable election of one category of remedies (namely FRAND royalties) rather than others. By making a FRAND commitment, the patentee has agreed to license any standard implementer and has thereby conceded that a FRAND royalty is proper and adequate compensation for practicing its patent.

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Samsung itself recognized this in 2007 in a case against Ericsson, stating: “The Claimant, *having committed itself to licensing the Patents upon fair, reasonable and non-discriminatory terms, has accepted that it can be compensated in monetary terms for any use of the Patents.*”

(*Telefonaktiebolaget LM Ericsson v Samsung Electronics UK Ltd.*, HC06 C00618 (High Court of Justice, Chancery Division, Patents) ¶¶ 108-109 (emphasis added), *available at*

<http://docs.justia.com/cases/federal/district->

[courts/california/candce/5:2011cv01846/239768/663/11.pdf?ts=1327667141](http://docs.justia.com/cases/federal/district-courts/california/candce/5:2011cv01846/239768/663/11.pdf?ts=1327667141).) As Judge Posner explained:

By committing to license its patents on FRAND terms, Motorola committed to license [its declared-essential patent] to anyone willing to pay a FRAND royalty and thus implicitly acknowledged that a royalty is adequate compensation for a license to use its patent. How could it do otherwise? How could it be permitted to enjoin Apple from using an invention that it contends Apple *must* use if it wants to make a cell phone with UMTS telecommunications capability – without which it would not be a cell *phone*.

Apple, 2012 WL 2376664, at *12.

As a matter of equity, this means that, having made a FRAND commitment, the patentee could never show that money damages (*i.e.*, a FRAND royalty) are inadequate compensation for practicing its patents—a prerequisite under the *eBay* standard, *see* 547 U.S. at 391, which also should be given due consideration under the Commission’s public interest analysis. As Judge Posner found in *Apple*, “[a] FRAND royalty would provide all of the relief to which the [patentee] would be entitled if it proved infringement . . . , and thus it is not entitled to an injunction.” *Id.* at *13.

Similarly, having told companies that wish to implement the relevant standard that they may practice its declared-essential patents in return for FRAND royalties, the FRAND patent holder can hardly claim that it would be “irreparably harmed” by others practicing the patents—which is another *eBay* factor that holds relevance to a proper analysis of the public interest under Section 337(d). *See Microsoft Corp. v. Motorola, Inc.*, No. 1:11-cv-08540 (W.D. Wash. Nov. 30, 2012), ECF No. 607, slip op. at 13-14 (dismissing Motorola’s claim for an injunction on patents for which it had made a RAND declaration because that commitment meant “Motorola cannot demonstrate irreparable harm”). Again,

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the FRAND patent holder's remedy for any infringement is an award of a FRAND royalty, through an action in a district court.

* * * * *

For the reasons discussed above, a FRAND commitment should preclude an exclusion order. Simply put, FRAND patents are categorically different from other patents, and the difference arises from the patentee's own choice to participate in standard-setting and declare the patent as FRAND-committed. This choice brings benefits to the patent holder (for standards like UMTS, these include a huge class of potential licensees) but it also brings constraints—including limiting its remedy to money damages. Having elected to accept this FRAND bargain, the patent holder cannot later ignore the FRAND constraints and seek exclusionary remedies.

QUESTION 2. **Where a patent owner has offered to license a patent to an accused infringer, what framework should be used for determining whether the offer complies with a FRAND undertaking? How would a rejection of the offer by an accused infringer influence the analysis, if at all?**

RESPONSE:

Determining whether an offer complies with a FRAND undertaking involves both *procedural* and *substantive* frameworks. Apple uses its own discussions with Samsung to illustrate the mechanics of these frameworks. REDACTED

A. The Procedural Framework For Determining A FRAND Royalty

As explained in response to Question 1, a party that has made a FRAND commitment has agreed to limit itself to money damages and has disclaimed the right to seek injunctive relief or an exclusionary order. If the parties reach an impasse in license negotiations, the determination of a FRAND royalty rate for a United States patent is appropriately addressed by a district court, which are empowered to award money judgments. Such a case might take the form of a suit alleging infringement of the FRAND patents—which, if proven, would result in a FRAND royalty damages award. A district court could also

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consider whether a patent holder has breached its contractual obligations to license its FRAND patents on FRAND terms.

The U.S. District Court for the Western District of Washington, for example, is currently adjudicating a dispute over RAND licensing terms between Microsoft and Motorola. The court intends to set a RAND rate, and has just held a bench trial to receive evidence on these issues. *Microsoft Corp. v. Motorola, Inc.*, 2012 WL 4827743, at *9 (W.D. Wash. Oct. 10, 2012). The district court previously enjoined Motorola from seeking injunctive relief against Microsoft products in Germany because seeking such an injunction was inconsistent with Motorola's FRAND undertaking. *Microsoft Corp. v. Motorola, Inc.*, --- F.Supp.2d ---, 2012 WL 1669676 (W.D. Wash. May 14, 2012). The Ninth Circuit upheld that ruling, finding that a FRAND commitment is "at least arguably, a guarantee that the patent-holder will not take steps to keep would-be users from using the patented material, such as seeking an injunction, but will instead proffer licenses consistent with the commitment made." *Microsoft Corp. v. Motorola, Inc.*, 696 F.3d 872, 885 (9th Cir. 2012). Just last week, the district court entered a permanent injunction enjoining Motorola from pursuing injunctive relief on the declared-essential patents at issue. *See Microsoft Corp. v. Motorola, Inc.*, No. 1:11-cv-08540 (W.D. Wash. Nov. 30, 2012), ECF No. 607, slip op. at 13-14.

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(Samsung Pre-Hearing Statement at 3.) Samsung called neither. Samsung also could have called a fact witness to attempt to defend its licensing demand. Samsung did not do that, either.

The result of Samsung's procedural tactics is a failure of proof under the proper substantive framework for determining a FRAND royalty, as discussed below.

B. The Substantive Framework For Determining A FRAND Royalty

Substantively, a FRAND royalty must be fair, reasonable, and non-discriminatory. Three critical factors are (1) the royalty *base* on which the rate is to be applied, which must correspond to the standardized functionality; (2) the level of the royalty *rate* itself; and, (3) whether the licensor is treating all prospective licensees in an evenhanded, non-discriminatory fashion.

REDACTED

- 1. The Royalty Base For Standard-Essential Patents Should Be The Standardized Functionality.**

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It is black-letter patent law—not only for FRAND, but for general calculation of reasonable royalties—that the royalty base must be limited to the features allegedly covered by the patents, rather than the entire product in which those features are housed. *See LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 67 (Fed. Cir. 2012) (“Where small elements of multi-component products are accused of infringement, calculating a royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product.”); *see also id.* at 68 (“It is not enough to merely show that [the patented technology] is viewed as valuable, important, *or even essential* to the use of the [accused product]”) (emphasis added).

Here, the baseband processor is the correct royalty base. Those baseband processors allow the iPhone or cellular-enabled iPad to communicate with the cellular network and REDACTED.

(Tr. [Blevins] at 960:22-961:2, 965:25-966:13, 969:2-971:13; RX-1236C, RX-1237C.)

In contrast, the entire price of a device like the iPhone is a grossly overinclusive royalty base. The iPhone derives significant value from features independent of standardized functionality—such as the industrial design, the user interface, the camera, and the operating system. Charging royalties on the value of those unrelated features violates both FRAND and basic patent damages principles. *See, e.g., LaserDynamics*, 694 F.3d at 67.

2. The Royalty Rate For Standard Essential Patents Must Reflect What The Aggregate Royalty Burden Would Be If All Essential Patent Holders Took The Same Approach.

A FRAND *rate* is limited by the cumulative royalty an implementer of the standard must pay to practice all patents declared essential to the standard. If a patentee seeks a royalty of .75% of the average selling price of the device for a single declared essential patent and there are 200 declared essential patents, the royalty rate would be 150% of the price of the device. No standard can encourage adoption if

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the cumulative cost of implementing it becomes prohibitively expensive. Prohibitive royalties deter new entrants and reduce competition.

REDACTED

Notably, Samsung presented no evidence at the hearing that its declared-essential patents are more valuable than any other industry participant, justifying it receiving a disproportionate share of the royalty base. Nor, as demonstrated by the results-to-date of this investigation and litigation worldwide in which Samsung has sued Apple on its SEPs and repeatedly lost, could Samsung have made such a showing. (This is further discussed in the answer to Question 7 below.)

In considering these aggregate-burden issues, it is critical to bear in mind that Samsung is just one of many companies that have declared patents essential to the UMTS standard—and if Samsung’s approach were correct, each of these patent holders could demand the royalties Samsung is demanding. One study found that through 2008, the patents declared essential to the UMTS standard were assigned to 26 separate companies. Fairfield Resources International, Inc., *Review of Patents Declared Essential to WCDMA December 2008*, January 6, 2009, available at <http://frlicense.com/wcdma2.pdf>.

Moreover, because the iPhone incorporates technology far beyond UMTS, Samsung’s demand competes not just with license demands of other holders of UMTS patents but those from a variety of other standards. See Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 Tex. L. Rev. 1991, 1992 (2007) (“In the information technology sector in particular, modern products such as microprocessors, cell phones, or memory devices can easily be covered by dozens or even hundreds of

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different patents.”). These include, for example, the 802.11, or WiFi, standard developed by the Institute of Electrical and Electronics Engineers, which imposes a RAND licensing requirement similar to ETSI’s. In 2006, over 30 companies had declared patents essential to WiFi. *Id.* at 2027.

Against this backdrop, the consequences of Samsung’s non-FRAND demand are stark.

REDACTED. (Tr. [Blevins] at 965:11-17.) REDACTED

Then, on top of that exorbitant royalty, owners of other patents essential to other standards (such as WiFi) could charge similarly excessive royalties. Both economics and simple common sense dictate that such a result is not FRAND.

3. FRAND Offers Must Be Non-Discriminatory.

REDACTED demand is not only demonstrably unfair and unreasonable, it fails the test of non-discrimination. “Non-discrimination” means what it says: a FRAND licensor must treat equally situated parties in an evenhanded fashion.

Yet here, Samsung’s demand to Apple was without any precedent or support in Samsung’s licensing practices with other companies. REDACTED⁶

⁶ REDACTED

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C. Rejection Of An Offer By A Potential Licensee

Whether a potential licensee accepted an offer might be some evidence whether the offer is FRAND; if it were FRAND, a rational economic actor would likely accept it. That said, Apple does not contend that rejection of an offer, by itself, demonstrates that the offer was not FRAND. The rejection does not alone decide the FRAND issue—just as the tender of an offer does not, by itself, demonstrates that the offer is FRAND. The view of one party, whether licensor or licensee, is not decisive.

Apple discusses this subject at greater length in the answer to Question 7 below.

QUESTION 3. Would there be substantial cost or delay to design around the technology covered by the '348 and '644 patents asserted in this investigation? Could such a design-around still comply with the relevant ETSI standard?

RESPONSE:

This question implicates at least three separate issues:

First, as a threshold matter, on the present record, no design-around is necessary. The ALJ correctly found the accused Apple devices practice none of the asserted claims of the '348 and '644 patents.

Second, assuming that the baseband processors contained in the Apple devices were found to infringe—and, for the sake of argument, leaving aside the critical issue of compliance with the standard—there would be viable design around options from a purely technical perspective. REDACTED

Third, if the baseband processors in Apple's devices were found to infringe and the functionality of the asserted claims of the '348 and '644 patents was also found to be part of the standard, design around would not be possible without creating noncompliance with the standard. This would be so even

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though a design-around (or the selection of an alternative technology at the outset) would be feasible, because the standard “locks in” particular approaches to certain functionality. This is precisely why FRAND is so important—to safeguard against parties leveraging patents covering locked-in technology as a hold-up device to demand artificially high royalties—or even, as in this case, to remove products from the market entirely.

Each of these three issues is discussed below.

A. No Design Around Is Necessary.

The ALJ correctly determined that Apple’s accused products do not infringe any of the asserted claims of the ’348 and ’644 patents. Accordingly, there is no need for Apple to design around any technology covered by the ’348 and ’644 patents.

In particular, the ALJ determined that the accused Apple products do not infringe any of the asserted claims of the ’348 patent, claims 75-76 and 82-84, and that claims 75 and 82 REDACTED

Specifically, the ALJ found that the accused Apple devices do not:

- contain “a puncturer for puncturing two bits from the 32 bit codeword output by the controller,” as required by claims 82-84 (ID at 55);
- demonstrate “each of the two bits being punctured at a predetermined location,” as required by claim 82-84 (*id.* at 57);
- contain “a controller for outputting a 30 bit codeword . . . that corresponds to a 10 bit TFCI information input to the controller,” as required by claim 75 and 76 (*id.* at 71);
- demonstrate a “10 bit TFCI information input to the controller from a plurality of possible 10 bit TFCI information,” as required by claim 75 and 76 (*id.*);

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- demonstrate a “30 bit codeword from among a plurality of 30 bit codewords,” as required by claim 75 and 76 (*id.* at 72); or
- satisfy the requirement “wherein the 30 bit codeword output by the controller is equivalent to a 32 bit codeword that corresponds to the 10 bit TFCI information input to the controller,” as required by claim 75 and 76 (*id.*).

Similarly, the ALJ concluded that the accused Apple devices do not infringe any asserted claims of the '644 patent, claims 9-16, REDACTED

Specifically, the baseband processors do not:

- “extract[] a 60-bit rate-matched block”;
- “generat[e] 90 coded bits by rate-dematching the rate-matched block”;
- “decod[e] the coded bits at a coding rate or 1/3”; or
- “output[] the control information by checking the UE-ID specific CRC.”

(ID at 110, 120, 127, 136.)

REDACTED although Samsung declared the '644 patent essential to 3GPP standard TS 25.212 § 4.10 standard, the standard does not cover the technology at issue in the asserted claims or in the accused devices. REDACTED

Asserted claims 9-16 relate to receivers, and because the standard does not define receivers, claims 9-16 are therefore not standard essential. (Apple Post-HB at 92-93.) Further, the accused iPad and iPhone

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devices are not base station transmitters, so their operation is similarly not defined by the standard. (*Id.*) Accordingly, any discussion of design-around options for the '644 asserted claims does not implicate the issue of compliance with the standard because there is no portion of the standard with which a receiver is required to comply.

Based on this record and these findings, there should be no need for Apple or its suppliers to engage in any design around of the '348 and '644 patents.

B. Setting Aside The Standard, A Design Around Would Be Possible From A Technical Perspective.

Assuming for the sake of argument that Samsung had demonstrated infringement of the '348 and '644 patents by the accused Apple devices—and putting to the side the issues of whether Samsung's technology was actually standardized—design around would be possible from a technical perspective. Indeed, for each of the proposals Samsung made to 3GPP that it now claims incorporate the technology of the '348 and '644 patents, there was an alternative proposal made by another 3GPP participant for a different way to accomplish the same functionality. This alternative and other approaches would be viable design-around options for each of the patents—again, leaving aside the question of compliance with the standard.

For the '348 patent, encoding TFCI is possible—and, indeed, actually accomplished—in many ways other than that required by the asserted claims. REDACTED

(ID at 547; Apple Post-HB at 33.) REDACTED

Section 4.3.3 of the standard, unlike the asserted claims of the '348 patent, does not require a 10 bit of TFCI information input. (CX-1099 § 4.3.3 (“If the TFCI consist of less than 10 bits, it is padded with zeros to 10 bits, by setting the most significant bits to zero.”).)

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Second, prior to Samsung's proposal to encode 10 bits of TFCI using a second order Reed Muller code, Nokia had proposed a viable alternative for handling a 10 bit TFCI information input. In November 1998, Nokia suggested using two first order Reed Muller encoders by dividing 10 bits of TFCI information into two sets of five bits and encoding each set with a (16,5) encoder. (RX-0378 at 6379-80; Apple Post-HB at 18.) These two codewords would then be combined prior to mapping for transmission, thereby creating one 32 bit TFCI codeword output. (*Id.*) This Nokia proposal was incorporated in the June 1999 3GPP standard as the accepted method for encoding extended TFCI. (RX-0371C at 2996357-58; Apple Post-HB at 18.) Accordingly, designing around the asserted claims is not only possible, but methods to do so were widely known.

Similarly, for the '644 patent, if Samsung's position that any device capable of receiving an E-AGCH signal infringes the patent is accepted, it would be trivial to design around in the abstract. At the time Samsung's E-AGCH proposal was adopted by 3GPP, Motorola submitted a competing proposal using different "tail-biting" technology that performed better than Samsung's proposal. (RX-718 at APL794-A0000009562-63 (showing competing E-AGCH proposals at RAN1 Meeting #40), Apple Post-HB at 83-5, 128-29.) REDACTED

Moreover, any of the thousands of other rate-matching patterns that produce equivalent performance gains could be utilized, including those identified in the '644 specification that were not claimed. (Tr. [Stark] at 2226:9-2227:2, JXM-3 at 7:1-17.)

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C. **Assuming Samsung’s Technology Was In Fact Standardized And Infringed—Which Apple Disputes—Design Around Would Not Be Feasible Without Creating Noncompliance With The Standard.**

If Samsung were correct that (1) the accused Apple devices infringe the ’348 and ’644 patents and (2) practicing each element of the asserted claims is a necessary part of the UMTS standard and mandatory for the receiver, design around in compliance with the standard would, as a matter of logic, not be possible. As set forth more fully in response to Question 1, once a standard is set and industry participants have begun to implement particular provisions,⁷ they are “locked in” to using those provisions. Having sunk significant resources into developing, producing, and marketing devices compliant with those standardized provisions, an implementer cannot easily shift course.

This creates the potential for essential patent holders to “hold up” the implementers for excessive royalties. This potential for hold up and the leverage that accrues to a party with a standard-essential patent underscores the importance of enforcing the FRAND bargain and denying parties that have committed to FRAND an opportunity to seek exclusionary relief absent certain exceptional circumstances. That would be the case for both the ’348 and ’644 patents if they had been found to be infringed and essential for the accused devices—each would provide Samsung with the leverage of the entire UMTS standard for only minor changes to the standard.

This is certainly true of the ’348 patent. 3GPP could easily have selected a different code in 1999. But if Samsung were correct—and it is not—that it holds a patent over any way of using the subcode of a second order Reed Muller code that the standards body adopted for encoding TFCI information there is no potential design around available now for an implementer that wanted to comply with the standard.

The same is true for the ’644 patent. Although there were many potential rate matching patterns that could have been employed for the E-AGCH channel, once one was selected and standardized,

⁷ Apple notes that just because a product is operable on a standardized network does *not* necessarily mean that the product practices every provision of the relevant standard. For example, some standardized provisions are, according to the standard itself, optional.

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making a change would not be possible for an implementer that still wished to comply with that standard provision.

QUESTION 4. What portion of the accused devices is allegedly covered by the asserted claims of each of the '348 and '644 patents? Do the patents cover relatively minor features of the accused devices?

RESPONSE:

Even under Samsung's own allegations, a very minor portion of the functionality contained in the baseband processor chips purchased from Intel and Qualcomm is allegedly covered by the asserted claims of each of the '348 and '644 patents. Indeed, to refer to the asserted claims of the '348 and '644 patents as covering "features" of the accused devices—rather than mere functions—is to overstate their value immediately.

Dr. Walker, the former Chairman of ETSI, testified that in the ETSI database "there are thousands of patents that have been registered or disclosed as essential to UMTS" of which, of course, the '348 and '644 patents are but two. (Tr. [Walker] at 1342:23-1343:5.) Further, he explained that the volume of the printed UMTS standard would cover several meters:

It was described to me once that if we start with GSM specifications [the predecessor to UMTS] and if we were to write, as was the case at the time, each specification on a paper and then line them all up, it would be about a meter or meter and a half long. And the 3GPP specifications are a good five times.

Q. Five times that length?

A. Five times that length. There is a huge amount of work in 3GPP.

(Tr. [Walker] at 1340:19-1341:7.) Of that immense set of provisions set out in thousands of pages of standard specifications, the '348 patent and '644 patent each cover—even according to Samsung's own allegations, which Apple disputes—less than two pages.

Indeed, the functionality purportedly covered by the asserted claims of the '348 and '644 patents are merely "tweaks" to a massive set of standards. REDACTED

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Further, while there is undoubtedly value in the UMTS standard as a whole because it provides cellular functionality to the accused devices, the devices also offer a great number of features that have nothing to do with UMTS, let alone the purported functionality of the '348 and '644 patents. These features range from the distinctive industrial design of the Apple devices, to hundreds of thousands of software applications that offer users countless ways to use their iPhones and iPad, to the still and video camera functionality, to the Apple operating system and its ground-breaking touch-screen functionality. Apple has invested immense resources in developing its *non-standardized, product-differentiating* innovations, and these are the types of inventions that a jury in California recently found Samsung had copied from Apple (contributing to a \$1 billion verdict for Apple), and that the Administrative Law Judge in the 796 Investigation likewise found Samsung had infringed in that case. These non-standardized features and functionalities are the principal source of the consumer demand for, and the value of, the iPhone and iPad—not the cellular baseband processors that Samsung has accused of infringement.

Indeed, within these complex Apple products, the baseband processors—the components that contain the contains the hardware and firmware that Samsung alleges infringes the '644 and '348 patents—REDACTED and Samsung itself alleges that the '348 and '644 patents cover very specific and limited features within those baseband chipsets, as described below.

A. The Functions Allegedly Covered By The Asserted '348 Claims

The asserted claims of the '348 patent relate to the encoding of TFCI information on the cellular network only. Encoding TFCI information is a very narrow operation and a minimal part of the standard. TFCI bits are information used to inform a receiver (the base station) of the data rate of a given transmission frame. The '348 patent relates only to the efficiency by which TFCI bits are encoded prior to being transmitted to the receiver. Therefore, the asserted claims relate only to one aspect of TFCI

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information. For example, the asserted claims are unrelated to how a TFCI codeword is decoded by the base station.

TFCI encoding encompasses an exceedingly small portion of the vast UMTS standard dedicated to TFCI encoding. The relevant Section 4.3.3 covers only one and a half pages of the thousands and thousands of pages in the standard. TFCI encoding takes place solely within the baseband processor.

B. The Functions Allegedly Covered By The Asserted '644 Claims

Samsung alleges that the asserted '644 claims cover the ability of a baseband processor to decode an absolute grant transmitted on the E-AGCH control channel. Base stations use the absolute grant to tell each receiver within range the allowed maximum data rate it can use to transmit data to the base station. Accordingly, the ability to decode an absolute grant is only one small piece of circuitry within the baseband chip.

REDACTED

(Tr. [Min] at 1030:25-1031:10; *see also* Tr. [Stark] at 2234:6-2235:21.) In other words, the alleged advantage of the asserted '644 patent claims comes down to one numerical value among millions of lines of code in the devices.

Further showing the limited utility of the '644 patent, the section covering E-AGCH, 3GPP Technical Specification 25.212 Section 4.10, did not exist in earlier versions of the standard. (*See* RX-84 (early version of the standard); RX-927 at 77-78 (Siemens seeking to add Section 4.10 in November 2004).) Now that it has been added, Section 4.10 is less than two pages long in the thousands and thousands of pages of the UMTS standard. (RX-1345C at 72-73).

QUESTION 5. What evidence in the record explains the legal significance of Samsung's FRAND undertakings under French law?

RESPONSE:

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Apple and Samsung both submitted expert submissions regarding the significance of Samsung's FRAND undertaking under French law in connection with Apple's March 5, 2012 Motion for Summary Determination Terminating the Investigation as to the '644 and '348 Patents Based on Samsung's Agreements with Chip Suppliers and FRAND Commitments (Motion Dkt. No. 794-042).

Among other grounds, Apple sought summary determination that, as a matter of French law, Samsung's FRAND declarations to ETSI constituted irrevocable commitments to license its patents that remained open for acceptance by implementers such as Apple or, at a minimum, contractual commitments that Samsung could not breach by seeking an exclusionary remedy. In support of that position, Apple provided an expert submission of Professor Nicolas Molfessis, who teaches French contract law at the University Pantheon Assas in Paris (attached as Exhibit P to the Declaration of Nina S. Tallon in Support of Respondent Apple Inc.'s Motion for Summary Determination Terminating the Investigation as to the '644 and '348 Patents Based on Samsung's Agreements with Chip Suppliers and FRAND Commitments, March 5, 2012 ("Tallon Decl.")). Professor Molfessis explained that under the ETSI IPR Policy, ETSI is governed by French law and because ETSI had adopted an "association form," "all members of ETSI should be regarded as being contractually linked to each other and to the association." (Tallon Decl. Ex. P ¶¶ 54-55.) As a consequence of membership in ETSI, members are contractually bound by French law to adhere to the ETSI IPR Policy, including the obligation to make timely disclosure of potentially-essential IPR under Clause 4 and to make irrevocable FRAND commitments under Clause 6.1. (*Id.* ¶¶ 57-60.) Further, Professor Molfessis explained that as a matter of French law, a FRAND declaration constitutes a binding license offer by the declarant that can be accepted by a party implementing the standard regardless of whether certain terms, such as price, remain to be fixed. (*Id.* ¶¶ 61-71.)

Apple also relied on Samsung's own statements about French law in prior litigation—including as a respondent in the ITC—when Samsung similarly argued that ETSI membership was a contractual bar to seeking injunctive relief for declared-essential patents. Specifically, Samsung contended that a party's

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“enforcement of its intellectual property rights . . . (in seeking injunctive relief. . .) and/or its refusal to grant a license to the Defendants on fair, reasonable and non-discriminatory terms is in breach of the contract which exists between” parties with “common membership of ETSI.” (Tallon Decl. Ex. S [Samsung’s Re-Amended Defence and Counterclaim of March 15, 2007, *Telefonaktiebolaget LM Ericsson v. Samsung Electronics UK Limited*, U.K. High Court of Justice, Chancery Division, HC06 C00618] at ¶1A.) Samsung had also advanced a variation of Apple’s argument about the formation of a license under French law in a prior ITC investigation where another expert on French law testified for Samsung that “the price is not a necessity in order to conclude a valid contract license. The license already exists, was concluded before the price is determined.” (Tallon Decl. Ex. Q [Hearing Transcript, *In the Matter of Certain 3G Wideband Code Division Multiple Access Mobile Handsets and Components Thereof*, Inv. No. 337-TA-601 (ITC July 11, 2008)] at 1718.) *See also Apple Inc. v. Motorola Mobility*, 2012 WL 3289835, at *22 (W.D. Wis. Aug. 10, 2012) (holding under French law that “[a]s a potential user of the standards at issue and a prospective licensee of essential patents, Apple is a third party beneficiary of the agreements between . . . Motorola and ETSI,” including to license its patents on FRAND terms and to disclose IPR to ETSI).

Samsung opposed Apple’s motion and submitted a declaration from Professor Remy Libchaber of Paris I University. Professor Libchaber took a narrower view than Professor Molfessis of the scope of the FRAND obligation under French law. But Professor Libchaber nonetheless conceded that under French law, the FRAND commitment means “negotiations are compulsory in order to try to reach a mutual agreement” absent a reason to believe that an agreement with a particular party is inadvisable. (Exhibit 41 to Samsung’s Response to Apple Inc’s Statement of Material Facts, March 15, 2012, ¶ 86.)

During the summary determination period, Apple argued that French law operated to create “present license” obligations on the part of Samsung. Samsung opposed this position, and the ALJ ultimately sided with Samsung. Apple accordingly did not present further evidence on the “present license” issue at the hearing.

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But on the more basic issue of whether, under French law, FRAND commitments create binding obligations defined by the ETSI IPR Policy, there was no dispute. As discussed above, Apple presented the testimony of former ETSI Chairman of the Board Dr. Walker regarding the meaning of this policy. Samsung has never suggested that Dr. Walker's testimony contravened French law, or that French law somehow changed the express terms of the ETSI IPR Policy.

QUESTION 6. REDACTED

RESPONSE:

REDACTED

As set forth more fully in response to Question 1, a patent holder that has made a FRAND declaration is obligated to license its patents on FRAND terms. But the patent holder does not discharge this obligation simply by making an offer that the licensor self-servingly deems FRAND-compliant. The offer must actually be FRAND-compliant—and, moreover, the patent holder cannot use its FRAND patents to pursue exclusionary remedies.

REDACTED

QUESTION 7. REDACTED

RESPONSE:

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REDACTED

To be sure, a prospective licensee's decision to reject an offer does not, by itself, mean the offer was not FRAND—just as the licensor's decision to make the offer does not, by itself, mean the offer was FRAND. Apple believes the rules for adjudicating FRAND disputes should not turn solely on one party's view of the merits.

That said, if Samsung's offer were economically reasonable and grounded in proper allegations of actual infringement, one would have expected a rational economic actor like Apple to have accepted it rather than submitting to the expense, uncertainty, and risk that attends world-wide patent litigation.

The actual litigation outcomes have demonstrated, in jurisdiction after jurisdiction—including here in the ITC, in the 794 investigation—that Samsung has grossly over-reached in its allegations that Apple is using Samsung's patents and needs a license. This is shown by the below summary of the outcomes for both Samsung's declared-essential patents and other patents.

United States

In the United States, Samsung has asserted patent infringement claims in four cases: the 794 investigation in the ITC, two separate cases before the United States District Court for the Northern District of California ("California"), and one case before the United States District Court for the District of Delaware ("Delaware"). The Delaware case includes the same patents as the ITC case, and has been stayed pending the final resolution of the ITC case.

In the ITC, the ALJ made the following determinations:

- U.S. Patent No. 7,706,348 is not infringed (declared-essential patent)
- U.S. Patent No. 7,486,644 is not infringed (declared-essential patent)
- U.S. Patent No. 7,450,114 is not infringed and invalid
- U.S. Patent No. 6,771,980 is not infringed

The ALJ also terminated the investigation as to U.S. Patent No. 6,879,843 prior to the hearing on Samsung's motion.

In the first California case, a jury found that Apple did not infringe U.S. Patent Nos. 7,447,516, 7,675,941, 7,577,460, 7,456,893, and 7,698,711. The jury also found that Samsung's patent rights with respect to the '516 and '941 patents were exhausted based on Samsung's license with Intel. The '516 and '941 patents were both declared-essential, FRAND patents. The district court judge also granted Apple's motion for summary judgment of non-infringement on U.S. Patent No. 7,362,867, which Samsung declared essential to the UMTS standard.

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The second California case is still ongoing. Trial is scheduled to begin on March 31, 2014.

Germany

In Germany, the court found as follows:

- EP 1 005 726 is not infringed (declared-essential patent)
- EP 1 114 528 is not infringed (declared-essential patent)
- EP 1 188 269 is not infringed (declared-essential patent)

Netherlands

In the Netherlands, the court found as follows:

- EP 1 114 528 is not infringed (declared-essential patent)
- EP 1 097 516 is invalid (declared-essential patent)
- EP 1 478 136 is not infringed (declared-essential patent)

The court found that part of the EP 1 188 269 (declared-essential patent) patent is valid and infringed, but denied Samsung's request for an injunction.

France

In France, the court dismissed Samsung's application for a preliminary injunction against the iPhone 4S on December 8, 2011. The proceedings on the merits are ongoing.

Italy

In Italy, the court dismissed Samsung's application for a preliminary injunction against the iPhone 4S on January 5, 2012. The proceedings on the merits are ongoing.

Japan

In Japan, the court found that Apple did not infringe the JP 3,781,731 patent, and that the JP 3,614,846 patent was invalid.

Korea

In Korea, the court found as follows:

- KR 330,234 is invalid (declared-essential patent)
- KR 933,144 is invalid (declared-essential patent)
- KR 273,973 is not infringed

The court found that the KR 922,975 (declared-essential patent) and KR 913,900 (declared-essential patent) patents are valid and infringed, but granted Apple's motion to stay enforcement of an injunction pending appeal.

United Kingdom/Australia

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Although hearings are ongoing in the United Kingdom and Australia, no decisions have issued yet.

These outcomes make clear that Apple was correct to reject Samsung's offer. But even if events had gone otherwise, and Samsung had been proven correct, a standard implementer's rejection of an offer that is *later* found to be a FRAND offer cannot entitle the patentee to an exclusion order. Parties may in good faith disagree as to whether an offer is FRAND compliant—but it cannot be that a good faith disagreement places the implementer at risk of an injunction.

Indeed, if a patentee could make a license offer and force the potential licensee to bear the risk of an exclusion order if the Commission found that the offer was in fact FRAND, this would empower the patentee to exploit the hold-up power created by the threat of exclusion. Put simply, the patent holder could charge a premium to remove the sword hanging over the other party's head. This would skew the bargaining outcome and force the potential licensee to overpay for a license to ensure against the (potentially disastrous) outcome of exclusion. *See Microsoft Corp.*, 2012 WL 1669676, at *10 (“[A] negotiation where [the licensor] must either come to an agreement or cease its sales throughout the country . . . fundamentally places that party at a disadvantage.”).

In its enforcement action against Bosch, the FTC specifically addressed the danger of employing an expansive “unwilling licensee” concept to permit an SEP holder to cast off restrictions of its FRAND commitment. With respect to FRAND-committed patents, the FTC required Bosch to “agree[] not to seek injunctive relief against . . . third parties, unless the third party refuses in writing to license the patent consistent with the [FRAND commitment], or otherwise refuses to license the patent on terms that comply with the [FRAND commitment] as determined by a process agreed upon by both parties (e.g., arbitration) or a court.” Analysis of Agreement Containing Consent Order to Aid Public Comment at 5, *In re Robert Bosch GmbH*, F.T.C. File No. 121-0081 (F.T.C. Nov. 26, 2012), available at <http://www.ftc.gov/os/caselist/1210081/121126boschanalysis.pdf>. By this requirement the FTC made

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clear its view that a standard implementer does not become an “unwilling licensee” merely by rejecting a license offer that the declared SEP holder claims is FRAND.

The foregoing does not mean that the FRAND patent holder is without remedy, or that the potential licensee can “game the system.” As Judge Posner has pointed out, the implementer who rejects a license offer that is later found to be FRAND “[runs] the risk of being ordered by a court to pay an equal or even higher royalty rate, but that is not the same thing as [the patentee’s] being excused from no longer having to comply with its FRAND obligations.” *Apple*, 2012 WL 2376664, at *12. As Judge Posner further observed in response to the argument that preventing a patent owner from seeking an injunction deprives it of necessary leverage to extract a reasonable royalty, under the “American rule,” where each party ordinarily bears its own litigation costs, that is an ordinary outcome of litigation that does nothing to undermine the value of obtaining damages:

You can’t obtain an injunction for a simple breach of contract on the ground that you need the injunction to pressure the defendant to settle your damages claim on terms more advantageous to you than if there were no such pressure.

Id. at *13.

* * * * *

Accordingly, Apple’s refusal to agree to Samsung’s non-FRAND licensed demand does not make Apple an “unwilling licensee” freeing Samsung to seek an exclusionary remedy. To the contrary, for the reasons discussed in response to Questions 1 and 2, Samsung is an “unwilling licensor” that has made an excessive, non-FRAND demand—and wrongly sought to use the ITC to exclude Apple from the market.

QUESTION 8. [A]⁸ With respect to the asserted claims of the ’348 patent, what record evidence shows that a person of ordinary skill in the art would understand the phrase “10 bit TFCI information” to allow or preclude the use of padding bits? [B] What is the difference between the “10 bit TFCI information” on the portion of Table 1a shown in columns 13 and 14 of ’348 patent and the TFCI information with padding zeroes allegedly used in the alleged domestic industry devices? [C] Is the patent’s discussion of padding zeroes at col. 3, lines 27-34 of any relevance? [D] What consequence would construing “10 bit TFCI information” to allow padding bits have on the issues of infringement, validity, and the technical prong of the domestic industry requirement?

⁸ Parentheticals added to identify individual subparts of the question.

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RESPONSE:

As discussed in detail below, [A] a person of ordinary skill in the art would not understand the phrase “10 bit TFCI information” to allow less than 10 bits of TFCI information by substituting a “padding bit” for actual TFCI information. [B] The “10 bit TFCI information” in the portion of Table 1a shown in columns 13 and 14 of ’348 patent differs from REDACTED in the domestic industry devices because all 10 bits in Table 1a provide “information” about what TFCI is being used, whereas REDACTED in the domestic industry products are meaningful. [C] The patent’s discussion of padding zeroes at column 3, lines 27-34, is relevant because, read in the context of the remainder of column 3, lines 27-34 prove that “TFCI information bits” do not include padding bits. [D] Construing “10 bit TFCI information” to include padding bits would necessarily result in a finding that the Apple accused products do not infringe for the *additional* reason that REDACTED, not the required “10 bit TFCI information”; it would render the asserted claims invalid as obvious; and it would not upset the ALJ’s correct determination that the domestic industry products do not practice the asserted claims.

A. The Record Evidence Shows A Person Of Ordinary Skill In The Art Would Not Understand The Phrase “10 bit TFCI Information” To Refer To A Combination Of Information Bits And Padding Bits.

“Padding” is the practice of appending meaningless bits to facilitate data storage and transmission in uniform units. For example, many computer systems store bits in 8-bit units (called bytes). If one needs to store only 1 bit of information (e.g., “1” for “yes” and 0 for “no”), the computer places that 1 bit of information in the 8-bit unit and then fills the 7 unused bit positions with placeholders called “padding” bits. When the system later accesses the 8 bits, it interprets the 1 information bit and ignores the other 7 bits because they are “padding”—that is, they do not carry any information. If the information bit changes from a 1 to a 0, then the interpretation of the 8 bits will change from “yes” to

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“no.” By contrast, if one or more of the padding bits change from 0 to 1, or vice versa, it will have no impact, because the padding bits contain no information about whether the value is “yes” or “no.”⁹

Question 8 first asks what record evidence shows that a person of ordinary skill in the art would understand the phrase “10 bit TFCI information” to allow or preclude padding bits from being counted as “TFCI information” bits. In short, the ’348 patent itself, the parties’ Joint Technology Stipulation, the trial testimony of Apple’s expert Dr. Davis and Samsung’s expert Dr. Min, and the relevant portions of the ETSI standard all confirm that a person of ordinary skill in the art would *not* have understood the phrase “10 bit TFCI information” to include padding bits. The ALJ thus correctly concluded that a “10 bit TFCI information” does not include padding bits. (ID at 547.)

First, the ’348 patent’s written description repeatedly and consistently uses the term “TFCI information” to refer only to those bits that carry information about the TFCI, *see, e.g.*, JXM-1 [’348 patent] at 34:11-14; 28-32:

For the input of 10 *information* bits, the (30, 10) encoder outputs a 30-symbol codeword by combining 32 Walsh codes of length 30 and 32 mask sequences generated using five basis mask sequences. . . . For the input of 7 *information* bits, the (30, 7) encoder outputs a 30-symbol codeword by combining 32 Walsh codes of length 30 and four basis mask sequences. The four basis mask sequences are obtained by combining two of five basis mask sequences.

(*See also id.* at 10:15-17 (“[T]he total number of necessary codewords is $2^n=1024$ for all possible 10 input *information* bits (TFCI bits).”); Apple Resp. to Petitions for Review at 25 (explaining that, where there are 3 bits of padding in a 10-bit input, then the total number of codewords is only 128 and, thus, the number of “information bits” would be 7).) The specification further explains that, in codeword generator embodiments, when there are fewer than 10 TFCI information bits, the inputs to the remaining basis mask sequences are “blocked” so that fewer than all available basis mask sequences are used to

⁹ Of course, the same principles apply if the amount of information (and therefore the number of information bits required to represent that information) increases. For example, if there are 4 possible values, 2 information bits are required: 00, 01, 10, and 11. In that case, there will be two information bits and 6 bits of padding in an 8-bit storage unit. 3 information bits can represent 8 values; 4 information bits can represent 16 values; 5 information bits can represent 32 values. In every case, “padding” bits will be used so that the total number of bits in the unit is 8.

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calculate the codeword. (*E.g.*, JXM-1 [’348 patent] at 14:1-10 (“That is, the (32, 9) encoder can be implemented by blocking input and output of one of the four basis mask sequences generated from the basis mask sequence generator 820 shown in Fig. 8.”); *see also id.* at 14:11-20.)

The unasserted claims of the ’348 patent further confirm that a person of ordinary skill in the art would not understand the phrase “10 bit TFCI information” to include padding bits, because the unasserted claims are directed to the use of a “10 bit unit” that may contain fewer than 10 TFCI information bits. Claim 36, for example, is directed to an encoding apparatus that comprises “a basis sequence generator for receiving TFCI information bits in a **10 bit unit**,” and a codeword generator for outputting a 32 bit codeword. (*Id.* at 41:41-55 (emphasis added).) Claim 38, which depends from claim 36, then narrows the claim to cover the circumstance in which there are fewer than 10 TFCI information bits and padding is used:

The TFCI encoding apparatus of claim 37, wherein if the **TFCI information bits** are less than 10 bits, 0 is added to the TFCI information bits to represent the TFCI information bits in a **10 bit unit**.

(*Id.* at 42:1-4 (emphasis added); *see also id.* at claims 42, 44, 46, 48, 52, 54, 56, 58, 61, 63.)

These claims demonstrate under the doctrine of claim differentiation that “TFCI information bits” is narrower in meaning than a “10 bit unit.” *Bradford Co. v. Conteyor North America, Inc.*, 603 F.3d 1262, 1270-71 (Fed. Cir. 2010) (applying doctrine of claim differentiation to construe term in

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independent claim in view of dependent claim that narrowed the scope of the claim). (*See also* Apple Resp. to Petitions for Review at 25-26; Apple Post-HB at 46-47).¹⁰

Second, Samsung's newfound¹¹ argument that the "TFCI information" can include padding bits contradicts the parties' Joint Technology Stipulation (which Samsung and Apple jointly filed after consultation with the Staff). In that stipulation, the parties agreed that "the extended TFCI can represent 1 of 128, 1 of 256, 1 of 512, or 1 of 1024 different values with 7, 8, 9, or 10 ***TFCI information bits*** respectively." (Joint Technology Stipulation at 3 (emphasis added).) 7 TFCI information bits combined with 3 bits of padding can only represent 128 values because the last 3 bits are ignored. (*See* Tr. [Min] at 1257:6-15.) The 7 bits of TFCI information combined with 3 bits of padding cannot be a "10 bit TFCI information" because it cannot represent 1024 different values. Thus, Samsung ***stipulated*** that a "TFCI information" excludes padding bits. Its new and contradictory argument should be given little weight.

Third, the hearing testimony of Dr. Davis and Dr. Min further confirms that a person of ordinary skill in the art would not understand the phrase "10 bit TFCI information" to include padding bits. Dr.

¹⁰ Samsung's Petition for Review argued that "TFCI information" in claims 75 and 82 is broader than "TFCI information" in the other independent claims, because in claims 75 and 82 those words precede the word "bits" and in other claims they precede "input." (Samsung Petition for Review at 16-17.) This argument fails. Both claims use the identical language "TFCI information," and those words are presumed to have the same meaning in all the claims. *Digital-Vending Services Intern., LLC v. University of Phoenix, Inc.*, 672 F.3d 1270, 1275 (Fed. Cir. 2012) (citing *Fin Control Sys. Pty, Ltd. v. OAM, Inc.*, 265 F.3d 1311, 1318 (Fed. Cir. 2001)) (same terms in different claims presumed to have the same meaning); *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) ("[A] claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent.") (citing cases). Samsung's argument ignores its expert's admission that the claims distinguish "10 bit TFCI information" from a "10 bit unit" containing "information" and "padding." (Apple Resp. to Petitions for Review at 25-26.) Further, Samsung's argument implausibly construes the word "input" as a noun. In the relevant portion of the asserted claims, the word "input" is a verb specifying that the "10 bit TFCI information" is input "to the controller."

¹¹ Samsung first raised the argument that "padding" bits are TFCI information during its expert's deposition on April 12, 2012.

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Davis testified that “10 bit TFCI information” does not include padding.¹² (Tr. [Davis] at 2085:2-4.)

Likewise, Dr. Min’s testimony that Apple accused products (which REDACTED

) have a “10 bit TFCI information” concedes that the term does not include padding—at least when Samsung is interpreting the phrase for purposes of asserting infringement. (*See, e.g.*, Tr. [Min] at 546:13-547:3.)

Fourth, the accused section of the ETSI standard provides contemporaneous evidence that participants in the standards setting process understood the phrase “TFCI information” to exclude padding bits. Section 4.3.3 of the ETSI standard does not require a “10 bit TFCI information” input; rather, it allows *up to* 10 bits of TFCI information input. (Tr. [Davis] at 2058:3-15; CX-1099 § 4.3.3 (“if the TFCI consists of less than 10 bits, it is padded with zeros to 10 bits, by setting the most significant bits to zero.”).) Dr. Min did not contest this. He admitted that the standard permits using less than 10 bits of TFCI information and padding with zeros. (Tr. [Min] at 1245:6-14.)¹³

B. The “10 Bit TFCI Information” In The Portion Of Table 1a Shown In Columns 13 And 14 Of ’348 Patent Differs From The REDACTED In The Domestic Industry Devices Because All 10 Bits In Table 1a Provide “Information” About The TFCI.

Question 8 next asks what the difference is between the “10 bit TFCI information” in the portion of Table 1a shown in columns 13 and 14 of ’348 patent and REDACTED

used in the alleged domestic industry devices. The “10 bit TFCI information” in the portion of Table 1a shown in columns 13 and 14 of ’348 patent differs from the REDACTED in the domestic industry devices because all 10 bits in Table 1a provide “information” about what TFCI is being

¹² Samsung’s Petition for Review argues that Dr. Min offered the unrefuted opinion that “10 bit TFCI information” includes padding. (Samsung Petition for Review at 17-18.) Samsung is wrong. Dr. Davis refuted it. When asked on cross whether he disputed that the standard encodes a “10 bit TFCI information,” Dr. Davis testified: “I do dispute it. Those 10 bits that you put in may not be TFCI information. There is, in the standard, discussion of padding.” (Tr. [Davis] at 2085:2-4.)

¹³ Samsung’s Petition for Review argues the standard includes the concept of adding padded zeros if there are fewer than 10 TFCI input bits, and therefore a “10 bit TFCI information” must include padded bits. (Samsung Petition for Review at 18.) Samsung incorrectly ignores that the standard states that the TFCI bits are padded with zeros to “10 bits,” not to “10 TFCI information bits.” (Apple Resp. to Petitions for Review at 25.)

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used, whereas REDACTED in the domestic industry products are meaningful. To the extent that the domestic industry products contain a 10 bit unit REDACTED

The distinction is readily apparent when one considers the effect of changing one of the first three 0s in Table 1a to a “1,” and the effect of changing REDACTED in the domestic industry products to a “1.” For example, the first sequence listed on the left side of Table 1a is 0000000000. Because all 10 bits are “information,” this sequence is the 1st of 1024 possible values that can be represented by a 10 bit TFCI information. According to the table, this sequence is encoded with the 32-bit codeword 00000000000000000000000000000000. (JXM-1 [’348 patent] at 13-14 (first row on the left side of Table 1a).) If the third bit from the left changed from a 0 to a 1, the sequence would change to become 0010000000, which is shown in the seventeenth row on the left side of Table 1a in column 15. This sequence represents the 129th value of the 1024 possible values that can be represented by a 10 bit TFCI information and (as shown in Table 1a) is encoded with the 32-bit codeword 00000001110011010110110111000111. By contrast, if the *same bit* in the Qualcomm-baseband processor products were changed to a 1 (so that the sequence of the same 10 bits was 0010000000), REDACTED

C. The Patent’s Discussion Of Padding Zeroes At Col. 3, Lines 27-34 Demonstrates The Difference Between “TFCI Information” And “Padding.”

Question 8 next asks whether the patent’s discussion of padding zeroes at column 3, lines 27-34, is of any relevance. The answer is yes: read in the context of the remainder of column 3, lines 27-34 prove that “TFCI information bits” do not include padding bits. Column 3, lines 6-11 indicate that “TFCIs are categorized into a basic TFCI and an extended TFCI. The basic TFCI represents 1 *to 64*

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different information including the data rates of corresponding data channels using **6 TFCI information bits**, whereas the extended TFCI represents **1 to 128, 1 to 256, 1 to 512, or 1 to 1024 different information** using **7, 8, 9 or 10 TFCI information bits.**” (Emphases added.) In other words, an encoder can encode a “6 bit TFCI information” that represents values 1 to 64, a “7 bit TFCI information” that represents values 1 to 128, an “8 bit TFCI information” that represents values 1 to 256, a “9 bit TFCI information” that represents values 1 to 512, or a “10 bit TFCI information” that represents values 1 to 1024. Column 3, lines 27-34, of the patent then explains that for basic TFCI encoding, if there are less than 6 bits of information needed (for example, if only 16 or 32 different TFCI are utilized), zeros are added to obtain 6 bits. In other words, if there are only 32 possible TFCI values, the first 5 bits will be “information” bits (because 5 bits can represent 32 different states), and 1 padding bit will be used to maintain the total length of the unit as 6. Tellingly, unlike the description at column 3, lines 6-11, column 3, lines 27-34, does not state that adding zeros will result in 6 bits of TFCI *information*. (JXM-1 [’348 patent] at 3:30-34.)

D. Construing “10 Bit TFCI Information” To Include Padding Bits Would Not Affect The ALJ’s Determination Of No Violation For The ’348 Patent.

Question 8 finally asks what consequence construing “10 bit TFCI information” to include padding bits would have on the issues of infringement, validity, and the technical prong of the domestic industry requirement. As we discuss in the subsections below, construing “10 bit TFCI information” to include padding bits would necessarily result in a finding that the Apple accused products do not infringe for the *additional* reason that they REDACTED not the required “10 bit TFCI information.” Further, the asserted claims would be rendered invalid as obvious because the prior art basic TFCI encoding apparatus described in the ’348 patent could indisputably encode a 10-bit TFCI information, as long as at least four of those “TFCI information bits” (under Samsung’s erroneous construction) are permitted to be padding. Finally, it would not upset the ALJ’s determination that the domestic industry products do not practice the asserted claims because Samsung never proved that the

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Qualcomm baseband processors receive a 10-bit unit (REDACTED

).

1. Construing “10 Bit TFCI Information” To Include Padding Bits Would Result In An Additional Reason Why The Accused Products Do Not Infringe.

If “padded zeros” are “TFCI information,” then Apple’s accused products do not infringe for the additional reason that they REDACTED

. The Intel baseband processors in Apple’s accused products REDACTED

. (Tr. [Davis] at 2045:5-11; RX-1285C at 593DOC000139-140.) REDACTED

. (Tr. [Davis] at 2045:5-11; RX-1285C at 593DOC000139-140.) Under Samsung’s erroneous interpretation of the claims, however, REDACTED

, and therefore the accused products do not infringe because they do not include “a controller for outputting a [30 or 32] bit codeword . . . that corresponds to a 10 bit TFCI information input to the controller.” No 10-bit unit is ever input to the controller in the Apple accused products; REDACTED

2. Construing “10 Bit TFCI Information” To Include Padding Bits Would Render The Asserted Claims Invalid Over The Existing TFCI Encoding Scheme.

If padded zeros are TFCI information, then the “basic TFCI” encoding apparatus that was part of the prior art ETSI standard renders all of the claims obvious. The basic TFCI encoding would generate the identical codewords as the allegedly novel encoder would if 6 bits of actual information and 4 padded zeros were encoded. Indeed, the “basic TFCI” encoder in the prior standard generated the first 64 codewords shown in Table 1a in the ’348 patent.¹⁴

3. Construing “10 Bit TFCI Information” To Include Padding Bits Would Not Upset The ALJ’s Determination That The Domestic Industry Products Fail To Practice The Asserted Claims.

¹⁴ Samsung did not raise its argument that padded 0s are TFCI information bits until Dr. Min’s deposition, therefore Apple did not have an opportunity to respond to it in an invalidity expert report.

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If the Commission were to construe “10 Bit TFCI Information” to include padding bits, the domestic industry products still would not practice the asserted claims for at least three reasons.

First, there is no dispute that the codeword that is output by the Qualcomm baseband processors REDACTED , and therefore, regardless of whether “padding” bits can be “TFCI information,” the domestic industry products would not output a codeword that “*corresponds* to a 10 bit TFCI information” as required by the asserted claims. (*See* Apple’s Resp. to Petitions for Review at 24.)

Second, the evidence does not establish that the domestic industry products have a “10 bit TFCI information” because REDACTED

. (*See id.*)

Third, the Qualcomm-baseband processor domestic industry products do not practice asserted claims 75 and 82 for the additional reason that they do not contain a “puncturer for puncturing” as required by claim 82 or a “controller for outputting a 30 bit codeword” as required by claim 75. (ID at 547; 557.)

QUESTION 9: With respect to the asserted claims of the ‘348 patent, what claim language, if any, limits the claim to the use of a look up table and precludes the claim from covering the embodiment of the invention shown in Figures 8 and 14 of the ‘348 patent?

RESPONSE:

The plain meaning of the asserted claim language “from among a plurality of [30 or 32] bit codewords,” limits the asserted claims to look-up tables and the language of unasserted claims of the ‘348 patent—which expressly claim codeword generators—confirms that the asserted claims do not extend to codeword generators such as those shown in Figures 8 and 14.

A. The Asserted Claim Language “From Among A Plurality Of [30 Or 32] Bit Codewords” Limits The Asserted Claims To The Use Of A Look-Up Table.

The plain meaning of the phrase “from among a plurality of ... codewords” in each asserted claim requires the use of a look-up (or “codeword”) table. That language requires that the “controller” output a

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codeword “from among” other codewords, which is precisely what is done when a look-up table is used. A look-up table contains all possible inputs and the plurality of codewords corresponding to each of them. When data is input to the controller, the controller selects the correct codeword for that data by matching it to the list of available input data stored in its memory, and then outputs the codeword that is designated as corresponding to that input data.

Construing the asserted claims to extend to codeword generators such as those depicted in Figures 8 and 14 (as the ALJ did at Samsung’s request) reads “from among a plurality of [30 or 32] bit codewords” out of the claims, because removing those words does not change the asserted claims’ scope under the ALJ’s construction. That is, if the controller limitation were instead “a controller for outputting a [30 or 32] bit codeword ~~from among a plurality of [30 or 32] bit codewords~~ that corresponds to a 10 bit TFCI information input to the controller,” the claim would have precisely the same meaning under the ALJ’s erroneous construction. Such a construction is presumptively wrong. *See, e.g., Texas Instruments v. Int’l Trade Comm’n*, 988 F.2d 1165, 1171 (Fed. Cir. 1993) (rejecting patentee’s proffered claim construction because it “would render the disputed claim language mere surplusage”).

Further, the operation of the “codeword generator” embodiment, shown in Figures 8 and 14, is not described by the plain English meaning of the phrase outputting a codeword “from among a plurality of . . . codewords.”¹⁵ A codeword generator, as depicted in Figures 8 and 14, does not contain a “plurality of codewords” let alone select one codeword “from among a plurality” of codewords. On the contrary, a codeword generator always and only generates a single codeword.

Annotated Figure 8 below shows the generation of a single codeword (red) by combining 10 TFCI input bits a0 thru a9 (blue) with ten basis sequences from basis sequence generators 800-820 (green) using multipliers 840-849 (orange) and an adder 860 (purple). *See JXM-1* [‘348 patent] at 31:35-32:17 (describing operation of Figure 8). The apparatus depicted in Figure 8 does not contain “a

¹⁵ For the purposes of this Commission question only, Figures 8 and 14 are equivalent. Samsung admits that Figure 8 represents a “codeword generator” embodiment. (Samsung Responsive Markman Br. at 11.)

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plurality” of codewords nor output a codeword “from among” a plurality of codewords. It simply generates a single codeword.

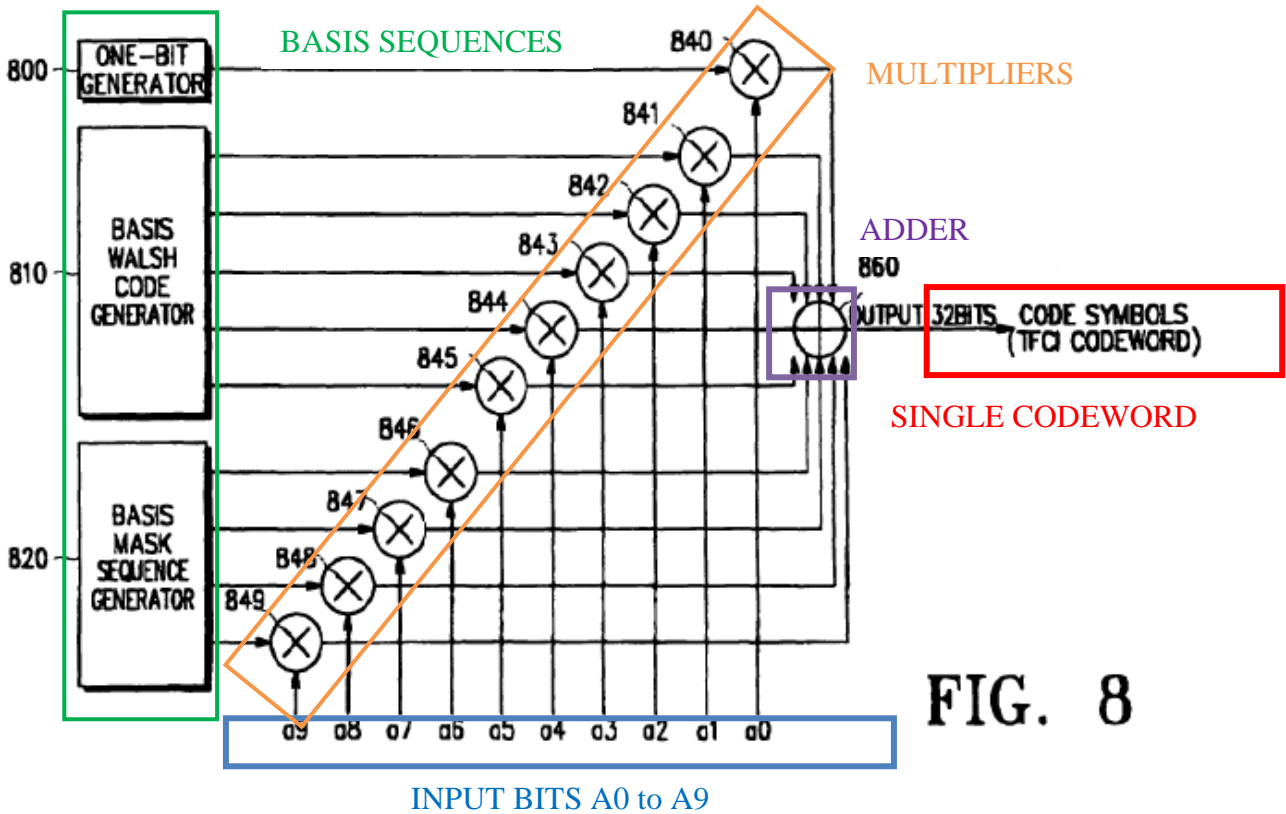


FIG. 8

Indeed, in the '348 patent's written description, the *only* embodiments that involve selecting a codeword “from among a plurality of [30 or 32] bit codewords” use look-up tables, such as those set forth in Figures 4B, 5C, and 13 and Tables 1A-1F. (JXM-1 ['348 patent], 6:63-67, Fig. 13, Tables 1A-1F; *id.*, 3:34-45 (“The biorthogonal encoder 402 has a predetermined encoding table. . . . One of the [codewords] is then selected based on the [TFCI information] bits.”).) In these look-up table embodiments, when the TFCI is input into the encoder, the encoder simply accesses the look-up table (which contains all of the codewords that make up the code and their corresponding 10-bit inputs) and outputs—from among the plurality of stored codewords—the single codeword that corresponds to the particular 10-bit sequence input. (JXM-1 ['348 patent].) The '348 patent does not describe an apparatus other than an encoding table that selects a codeword “from among a plurality” of codewords. This lack of disclosure confirms that the “look-up table” and “codeword generator” embodiments are distinctly claimed. *See, e.g., Wang*

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Laboratories, Inc. v. America Online, Inc., 197 F. 3d 1377, 1382-83 (Fed. Cir. 1999) (“The term ‘frame’ in the asserted claims was restricted to character-based protocol embodiment.”).

B. The Language Of The Unasserted Claims Further Demonstrates That The Asserted Claims Are Limited To A Look-Up Table

The plain language of unasserted claims 36, 42, and 46—which specifically claim a “codeword generator” such as those depicted in Figures 8 and 14—further confirms that the asserted claims are directed to look-up tables. (*E.g.*, JXM-1 [’348 patent], 41:40-55 (claim 36) (“A Transport Format Combination Indicator (TFCI) encoding apparatus . . . comprising . . . *a codeword generator*”); *id.*, 42:24-38 (claim 42) (same); *id.*, 42:59-43:3 (claim 46) (“A method for encoding . . . comprising: . . . generating, *by a codeword generator*, a codeword containing 32 bits based on the TFCI information bits”) (emphasis added).) Claims 36, 42, and 46 each generate a *single* codeword by combining basis sequences based on the 10-bit input TFCI. Claim 46, for example, is directed to “generating, by a codeword generator, a codeword containing 32 bits based on the TFCI information bits; and outputting the generated codeword . . .” The claim does not include a “plurality of codewords” or selecting “from among” them, because that would be inconsistent with the functionality of a codeword generator. Having distinctly claimed alternative embodiments in separate claims, Samsung may not now assert that those claims cover all embodiments. *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1383 (Fed. Cir. 2008) (“[D]ifferent claims are often directed to different disclosed embodiments.”); *PSN Ill., LLC v. Ivoclar Vivadent, Inc.*, 525 F.3d 1159, 1166 (Fed. Cir. 2008) (“[C]ourts must recognize that disclosed embodiments may be within the scope of other allowed but unasserted claims.”).

QUESTION 10: [A] With respect to asserted claims 82-84 of the ‘348 patent, identify any support in the patent specification or the record generally for construing the term “puncturing” in asserted claims 82-84 to encompass “excluding” bits (*see, e.g.*, ‘348 patent at 32:10-17). [B] What consequence would such a construction have on the issues of infringement, validity, and the technical prong of the domestic industry requirement?

RESPONSE:

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As discussed in detail below, [A] “Puncturing” in the asserted claims 82-84 does not encompass “excluding.” [B] Even if the Commission were to incorrectly construe puncturing to encompass excluding, it would not upset the determination of no infringement and no technical prong of domestic industry, and would not meaningfully impact the invalidity analysis.

The first part of Commission Question 10 requests “[w]ith respect to asserted claims 82-84 of the ’348 patent, identify any support in the patent specification or the record generally for construing the term ‘puncturing’ in asserted claims 82-84 to encompass ‘excluding’ bits (*see, e.g.*, JXM-1 at 32:4-17).” Neither the ’348 patent specification nor the hearing record supports construing the term “puncturing” in asserted claims 82-84 to encompass “excluding” bits. To the contrary, the ’348 patent specification and the record demonstrate that “puncturing” does not encompass “excluding” bits.

A. “Exclud[ing]” Appears In The ’348 Patent’s Written Description Only In Connection With A Modification To The Second Embodiment Of The Invention In Which There Is No Puncturing.

The word “excludes” (the only form of the word “excluding” that appears in the ’348 written description) appears exactly once in the written description of the ’348 patent. In that one instance, it is used to describe a “modification” to the second embodiment of the invention which *Samsung’s expert concedes does not involve puncturing*. (Tr. [Min] at 1201:24-1202:3) Thus, there is no support in the ’348 patent’s written description for construing the term “puncturing” in asserted claims 82-84 to encompass “excluding” bits.

The ’348 patent describes numerous embodiments, and those embodiments are claimed differently. For example, as discussed above, it describes several embodiments of the alleged invention that use encoding tables. It describes other embodiments that use codeword generators. (*See above* at Response to Commission Question 9.) It also describes, under the heading “First Embodiment,” several examples of the alleged invention in which a length 32 codeword is generated from 7, 8, 9, or 10 information bits. (*See* Response to Commission Question 8; JXM-1 at 12:63-14:21.) In those examples, there is never a 30-bit codeword. (*Id.*) Under the heading “Third Embodiment,” it describes several

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examples of the alleged invention in which the minimum distance of 11 is achieved (i.e., a higher minimum distance than the code used in the ETSI standard) for length 30 codewords from 7, 8, 9, or 10 information bits. (*Id.* at 34:11-32.)

The portion of the '348 patent titled "Second Embodiment" describes (30, 10) encoders that output length 30 codewords "equivalent" to the length 32 codewords output by the (32, 10) encoders described under "First Embodiment."

The (32, 10) TFCI encoder that outputs a 32-symbol TFCI codeword in view of 16 slots has been described in the first embodiment of the present invention. Recently, the IMT-2000 standard specification dictates having 15 slots in one frame. Therefore, the second embodiment of the present invention is directed to a (30, 10) TFCI encoder that outputs a 30-symbol codeword in view of 15 slots. Therefore, the second embodiment of the present invention *suggests* an encoding apparatus and method for outputting 30 code symbols by puncturing two symbols of 32 coded symbols (codeword) as generated from the (32, 10) TFCI encoder.

(JXM-1 at 31:15-25 (emphasis supplied).)

The '348 patent states that the ETSI standards setting group's recent decision to move to a 15-slot radio frame "suggests" puncturing 2 symbols from the length 32 codeword output by the (32, 10) encoder because—as numerous members of ETSI recognized months before Samsung's alleged invention—that is "the most straightforward solution" to adjust TFCI encoding for the reduced frame size. (RX-372.) However, Samsung and its expert agree that there are other ways to obtain a length 30 codeword equivalent to a length 32 codeword. (Samsung Post-HB 71, 75 ("There is nothing necessary about puncturing instead of using any of the other tools available to reduce the length of a codeword."); Tr. [Min] 2997:19-2998:11.)

The '348 patent describes two alternatives to puncturing two bits from the 32-bit codeword. *Neither* of these alternatives is the solution ultimately implemented in the ETSI standard or that is performed by the accused products. *First*, the '348 patent describes that—instead of puncturing the codeword—an encoder can puncture two bits from the basis sequences used to generate the codeword, so that those basis sequences are reduced to 30 bits. (*See, e.g.*, JXM-1 at 32:18-36, esp. 24-30 ("In step **1210**, the j^{th} symbols $W1(j)$, $W2(j)$, $W4(j)$, $W8(j)$, and $W16(j)$ of the basis Walsh codes $W1$, $W2$, $W4$, $W8$, and

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W16 (each having two punctured bits) and the *j*th symbols M1(j), M2(j), M4(j), and M8(j) of the basis sequences M1, M2, M4, and M8 (each having two punctured bits) are received in step 1220.”) By puncturing the basis sequences, “[t]he (30, 10) encoder outputs 1024 codewords equivalent to the codewords of the (32, 10) encoder with symbols #0 and #16 punctured.” (*Id.* at 32:37-39.) When this is done, there is no reason to puncture the codeword, because the length of the codeword is already 30, rather than 32, bits.

Second, rather than performing any puncturing, the ’348 patent describes that it is possible to “modify” the second embodiment to “exclude” bits from the basis sequences, in which case no puncturing is required.

It will be easy to modify the second embodiment of [sic] present invention. For example, the one-bit generator **800**, basis Walsh generator **810**, [sic] basis mask generator **820** can generate 30 symbols which *excludes* the #0 and #16 symbols. The adder **860** then adds the output of the one-bit generator **800**, basis Walsh generator **810** and basis mask sequence generator **820** bit by bit and output [sic] 30 encoded symbols as TFCI symbols.

(*Id.* at 32:10-17 (emphasis added).) As explained below, this modification to the second embodiment is claimed in claims 67-74.

The text of the patent and the evidence at the hearing demonstrate that this “modification” does *not* involve puncturing. Instead, rather than puncturing a 32-bit codeword or puncturing length 32 basis sequences, the modification includes the use of basis sequences that are generated to be only 30 bits in length. (*Id.* at 32:11-14.) As a result, the codeword output by the controller in this modification to the second embodiment includes only 30 encoded bits. (*Id.* at 32:14-17.) There is never a 32-bit codeword and never a “puncturer” for puncturing that codeword. (*Id.*) Samsung’s expert, Dr. Min, admitted that the “modification” to the second embodiment does not involve any puncturing. (Tr. [Min] at 1201:24-1202:3 (“Q. And in the modified embodiment, there is no puncturing, correct? A. Let me just read this a little more carefully. Yeah, that’s correct.”).)

Thus, the written description of the ’348 patent demonstrates that “puncturing” does not encompass “excluding.” “Excluding” two bits from the basis sequences by never generating them is

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described as an alternative to puncturing length 32 codewords or basis sequences.

1. Unasserted Claims Of The '348 Patent Use “Excluded” To Refer To Basis Sequences That Have Not Been Punctured.

While a form of the word “exclud[ing]” appears only once in the '348 patent's written description, it appears eight times in its claims. The use of “excluded” in the '348 patent—in claims that do not depend from the asserted claims—further demonstrates that “puncturing” does not encompass “excluding.” *Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 807 (Fed. Cir. 2007) (finding a meaning differing from “perpendicular” where patentee “could have used the word ‘perpendicular,’ as they did in discussing their preferred embodiment . . .”).

Each of claims 67-74 is directed to the “modification” to the second embodiment of the invention described at col. 32:10-17, and uses “excluded” rather than “punctured.” *E.g.*, JXM-1 ['348 patent] at 45:11-15 (claim 67) (emphasis added):

The TFCI encoding apparatus of claim 1, wherein said mask sequence generator ***generates, as said basis mask sequences, sequences of length 30*** corresponding to basis mask sequences of length 32 ***from which the symbols at positions 0 and 16 are excluded.***

See also claims 68-74 (similar limitation, dependent from claims 5, 8, 10, 13, 15, 18, and 21, respectively). Importantly, ***none*** of the claims from which claims 67-74 depend include a puncturer or puncturing. Thus, the claims of the '348 patent do not suggest that “excluding” is one of multiple forms of “puncturing” (i.e., encompassed by puncturing). Indeed, the word “puncture[ed]” first appears in the claims of the '348 patent in claim 76, and the term “exclud[ing]” does not appear in any claims after claim 74.

It is well-settled Federal Circuit law that where different words are used in different claims, those words are presumed to have different meanings. *See Acumed*, 483 F.3d at 807; *Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998) (when different words are used in separate claims, they are presumed to have different meanings); *Tandon Corp. v. U.S. Int'l Trade Comm'n*, 831 F.2d 1017, 1023 (Fed. Cir. 1987) (same). *See also Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1349 (Fed. Cir. 2012) (“The fact that the two adjacent claims use different terms in parallel settings supports the district court's conclusion that the two terms were not meant to have the same meaning and

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thus that ‘adapted to’ was intended to have a different meaning from ‘capable of.’”). Administrative Law Judges have applied this well-established canon of claim construction on numerous occasions. *Certain Mobile Devices, Associated Software, and Components Thereof*, Inv. No. 337-TA-744, 2011 WL 6916539, at *98 (Initial Determination) (Dec. 20, 2011) (“Here, the claim language uses two different terms in reference to a data store and a notification list. . . Thus, ‘data store’ and ‘notification list’ refer to different things.”); *Certain Endoscopic Probes for Use in Argon Plasma Coagulation Systems*, 337-TA-569, 2011 WL 7592771, at *18 (Initial Determination) (Jan. 16, 2008) (“Absent something in the specification or prosecution history that would demand otherwise, ‘[t]here is presumed to be a difference in meaning and scope when different words or phrases are used in separate claims.’”). Thus, the use of “exclud[ing]” in the unasserted claims creates a presumption that “excluding” and “puncturing” are different. Nothing overcomes that presumption here. Indeed, as set forth above (and as Samsung’s expert admitted), the ’348 patent’s written description demonstrates that excluding is not a form of puncturing.

2. The Extrinsic Evidence Confirms That “Puncturing” Does Not Encompass “Excluding.”

The extrinsic evidence provides no support for construing “puncturing” to encompass “excluding.” Neither of the experts who submitted expert reports during the *Markman* proceeding opined that “puncturing” means or encompasses “excluding.” (See JXM-16 [Expert Report of Dr. James A. Davis] at 13-14; JXM-11 [Expert Report of Dr. Tim Williams] at 20-21.) Likewise, none of the dictionaries relied upon by any party during *Markman* briefing or at the hearing associates “puncturing” with “excluding.”

B. Construing “Puncturing” To Encompass “Excluding” Would Not Change The Finding Of No Violation.

The second part of Commission Question 10 asks “[w]hat consequence would [construing “puncturing” to encompass “excluding”] have on the issues of infringement, validity, and the technical prong of the domestic industry requirement?” If the Commission were to (incorrectly) construe “puncturing” to encompass “excluding,” it would not alter the ALJ’s findings of no infringement or no technical prong, and it would not meaningfully affect the invalidity analysis.

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1. Even If “Puncturing” Were Construed To Encompass “Excluding,” There Is No Infringement.

Even if the Commission were to determine that “puncturing” in claims 82-84 encompasses “excluding,” it would not support a finding that Apple’s accused products infringe those claims for several reasons.

First, Dr. Davis’s testimony regarding the operation of the Intel baseband processor chips in Apple’s accused products demonstrates that there is no “puncturer” (hardware or software) for “excluding” two bits from the 32-bit codeword. Instead, as Dr. Davis testified, in the Intel baseband processor products REDACTED

. (Tr. [Davis] 2052:2-2054:3.) There is no hardware or software that performs an act of “excluding” the last two bits; to the contrary, REDACTED

Second, Dr. Min *never testified* that the Apple accused products contain hardware or software for “excluding” two bits from the 32-bit codeword as part of TFCI encoding. Instead, Dr. Min’s testimony was that the REDACTED

(Tr. [Min] 556-558.) As used in the ’348 patent, “excluding” is not the same thing as REDACTED. Instead, “excluding” is used to refer to the act of never generating the relevant bits. (*See, e.g.,* JXM-1 at 32:11-14 (“For example, the one-bit generator **800**, basis Walsh generator **810**, basis mask sequence generator **820** can generate 30 symbols which excludes the **#0** and **#16** symbols.”); *id.* at 45:11-15 (unasserted claim 67) (“said mask sequence generator *generates*, as said basis mask sequences, *sequences of length 30* corresponding to basis mask sequences of length **32** from which the symbols at positions 0 and 16 are excluded.”).) This is not a process of REDACTED; it is a process of never generating them in the first place. There is no dispute that, in the accused products, REDACTED

. The fact that there is not enough room on the radio frame to transmit all 32 bits does not alter the analysis; Dr. Min pointed to nothing in the accused products that “excludes” any bits from being generated.

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Third, neither Samsung nor the Staff ever argued that the Apple accused products contain hardware or software for “excluding” two bits. Samsung argued REDACTED

. (See, e.g., Samsung Post-HB at 32-34.) The Staff argued REDACTED

. (Staff Post-HB at 40.) As explained above, this is not the same thing as arguing that two bits are “excluded” (i.e., never generated.) The last two bits are generated; they are simply not able to be mapped to a radio frame.

Fourth and finally, there is a second limitation of claims 82-84 that Apple’s accused products do not meet: a “puncturer for . . . outputting the 30 bit codeword.” (See Apple’s Contingent Pet. for Review at 20-22.) Specifically, there is no software in the Intel baseband processor chips that outputs a 30-bit codeword. REDACTED

. (Tr. [Davis] at 2048:24-2049:19.) REDACTED

. (*Id.* at 2049:8-16.) Dr. Min admitted that the output of the alleged “puncturer” in the Intel baseband chips REDACTED. (Tr. [Min] at 1209:12-15; see also Tr. [Davis] at 2056:10-18; 2127:18-2128:1).¹⁶

Thus, even if “puncturing” were interpreted to encompass “excluding,” and the Commission were to (incorrectly) determine that the Intel baseband processors contain software for “excluding” two bits from the 32-bit codeword, there still is no evidence that those processors contain any software for outputting a 30-bit codeword. To the contrary, the software asserted to be the “puncturer” never outputs a 30-bit codeword. Instead, REDACTED

¹⁶ As noted in Apple’s contingent petition for review, the ALJ failed to address this issue in the ID. (See Apple’s Contingent Pet. for Review at 21.) To the extent Samsung contends (as it did during post-hearing briefing) that use of “comprises” in the claim brings within the scope of the claim an output of any number of bits that is 30 or higher, that is incorrect. “Comprising” does not render explicit claim limitations superfluous. See, e.g., *Dippin’ Dots, Inc. v. Mosey*, 476 F.3d 1337, 1343 (Fed. Cir. 2007) (“The presumption raised by the term “comprising” does not reach into each of the six steps to render every word and phrase therein open-ended – especially where, as here, the patentee has narrowly defined the claim term it now seeks to have broadened.”); *Spectrum Int’l, Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1380 (Fed. Cir. 1998) (““Comprising’ is not a weasel word with which to abrogate claim limitations.”). Claim 82 requires a puncturer for outputting a 30-bit codeword. The claim cannot be infringed unless that element is met.

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(See Apple Post-HB at 32.)

2. The Invalidity Analysis Is Unaffected If The Construction Of “Puncturing” Is Broadened To Encompass “Excluding.”

Because it is undisputed that puncturing (under the plain meaning of that term) was well-known decades before the alleged invention of the '348 patent was conceived (*see* Apple's Contingent Pet. For Review at 11), incorrectly broadening that term to encompass “excluding” would not have any practical impact on the invalidity analysis for claims 82-84. All parties agree that Apple's prior art references, including the *MacWilliams* textbook from 1977, clearly disclose puncturing as a simple technique for reducing the length of a codeword. A month before the alleged invention of the '348 patent, 23 members of ETSI wrote that puncturing two bits was “the most straightforward solution” for TFCI encoding to fit the new 15-slot frame format. (RX-372.)

3. Even If “Puncturing” Were Construed To Encompass “Excluding,” There Is No Technical Prong Of Domestic Industry.

Even if the Commission were to construe “puncturing” to encompass excluding, it would not support a finding that Samsung proved the technical prong of the domestic industry requirement in the '348 patent. Indeed, for both varieties of asserted Samsung products (those that utilize a Qualcomm baseband processor and those that utilize an ST-Ericsson baseband processor), the ALJ concluded that the technical prong had not been proven for additional reasons independent of his interpretation of “puncturing.” Moreover, even applying an interpretation of “puncturing” that encompasses “excluding,” the evidence does not show that the Samsung domestic industry products contain hardware or software for “excluding” two bits from the 32-bit codeword.

First, as set forth in greater detail in Apple's Response to Samsung's and the Staff's Petitions for Review, the ALJ found that Samsung had failed to prove the technical prong of the domestic industry requirement on two independent bases for each of the asserted domestic industry products. With respect to Samsung products containing Qualcomm baseband processors, the ALJ concluded that none of the asserted claims was practiced because the Qualcomm baseband processors did not output codewords that “correspond to a 10 bit TFCI information input” as required. Instead, and as described above in

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connection with Question 8, the Qualcomm baseband processors REDACTED

, rather than 10 bits of information (which would require 1024 distinct codewords). (*See above* at 38; *see also* Apple’s Resp. to Petitions for Review at 26.) Thus, regardless of whether the Samsung domestic industry products containing Qualcomm baseband processors contain a “puncturer for puncturing” (which they do not), they do not practice claim 82.

With respect to the Samsung domestic industry products that utilize ST-Ericsson baseband processors, the ALJ agreed with Apple that Samsung failed to adduce *any* evidence as to how (if at all) those processors reduce the length of a 32-bit codeword to 30 bits. (ID at 556-57; *see* Apple’s Resp. to Petitions for Review at 26-27.) Indeed, Dr. Min admitted that he was unable to locate any code for the ST-Ericsson products that showed “puncturing” (under any meaning). (Tr. [Min] at 257:20-1259:17.) Samsung chose not to subpoena or depose any fact witness from ST-Ericsson to explain how its products work. Thus, whether or not “puncturing” encompasses “excluding,” there is no evidence in the record to support a finding that the ST-Ericsson baseband processors contain a “puncturer for puncturing.”

Second, Samsung made no attempt at the hearing to prove that the domestic industry products contain hardware or software for “excluding” bits, and there is thus no record evidence on which the Commission could properly find that the domestic industry products contain such hardware or software. Dr. Min offered no testimony that either the Qualcomm or the ST-Ericsson baseband processor products “exclude” bits from the 32-bit codeword as part of the encoding process.

Thus, even if the Commission were to incorrectly interpret “puncturing” to include “excluding,” there is no basis to find that Samsung met its burden to prove that the asserted domestic industry products contain a “puncturing for puncturing two bits from the 32 bit codeword.”

QUESTION 11: [A] What is the proper construction of “extracting”? [B] What variable, if any, in the source code relied upon by Samsung to prove infringement and domestic industry represents a “60-bit rate-matched block” that has been extracted from a received signal?

RESPONSE:

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A. Question 11[A]: The Proper Construction Of “Extracting”

For Question 11[A], it is unclear whether the Commission seeks a construction of the entire “extracting” limitation, which was a focus at the hearing, or solely the word “extracting,” which was not. Out of an abundance of caution, Apple addresses both below.

1. The “Extracting” Limitation Requires Hard Decision Decoding.

As was demonstrated below, the limitation “extracting a 60-bit rate-matched block from a signal received from a Node B” requires making hard decisions about 60 samples of the received signal—i.e., for each signal sample, the claimed receiver must decide whether it received a binary “1” or a binary “0.” This requirement is expressly set forth in the claim language and confirmed in the specification and file history.

First, the express language of the limitation defines *what* must be extracted (removed) from the Node B signal as “a 60-bit rate-matched block.” The parties stipulated that a “bit” is “a binary digit”—i.e., a binary “1” or a binary “0.” (Joint List of Dispute Claim Terms & Proposed Constructions, Oct. 21, 2011 at 6 (“bit” means “a binary digit”).) Accordingly, the plain claim language requires extracting exactly 60 binary digits (sixty “1”s and “0”s) from the received signal—no more, and no less.

REDACTED

; JXM-3 [’644 patent] at claims 9, 13 (reciting the “rate-matched block” is exactly “60-bits”).) Permitting the rate-matched block to be any number of binary digits (bits) other than 60 would improperly read this express numerical limitation out of the claim. *See August Tech. Corp. v. Camtek, Ltd*, 655 F.3d 1278, 1284 (Fed. Cir. 2011) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.”) (citing *Merck & Co. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005)); *see also Elekta Instr. S.A. v. O.U.R. Scientific Intern. Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000) (construing claim to avoid rendering the claim limitation superfluous); *Gen. Am. Transp. Corp. v. Cryo-Trans, Inc.*, 93 F.3d 766, 770 (Fed. Cir. 1996) (rejecting district court’s claim construction because it rendered claim term superfluous).

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In order to extract 60 binary digits from a received signal, a receiver must make a final decision for each of 60 signal samples about whether what was received was a binary 1 or 0. REDACTED The receiver must make that hard decision 60 times in order to produce a block of 60 bits (binary digits). Without making a hard decision for each signal sample about whether what was received was a binary “1” or a binary “0,” it is not possible to extract 60 *bits* (binary digits). (*Id.*) REDACTED

It was undisputed at trial, for example, that a receiver that generated multi-bit symbols from each sample of a received signal would *not* meet the literal terms of this limitation. (*Id.*) This is so because a symbol that is six bits long, for example, is not a “binary digit.” Instead, it can represent 64 possible values (not a binary 1 or 0). (REDACTED

Second, the ’644 specification consistently describes extracting exactly 60 binary digits from the received signal, and never discloses extracting anything else. (*See, e.g., JXM-3* [’644 patent] at 3:67-4:1 (“a *60-bit* rate-matched block is extracted from a signal received from a Node B”) (emphasis added); 4:14-16 (“a physical channel demapper extracts a *60-bit* rate-matched block from a signal received from a Node B”) (emphasis added).) There is no disclosure of using the received signal to generate symbols. There is no disclosure of performing soft-decision decoding. REDACTED

Indeed, attempting to distinguish the prior art in this investigation, Samsung said unequivocally that REDACTED

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Moreover, the specification defines a “rate-matched block” for the purposes of the ’644 patent as being exactly 60 binary digits. Specifically, the ’644 patent explains that a Node B transmits the “rate-matched block” in a 2 millisecond transmission time interval (a “2-ms TTI”). (JXM-3 [’644 patent] at 5:46-47 (“The channel-coded control information is delivered in a 2-ms TTI of the E-AGCH.”); 6:59-62 (“30 bits are punctured from the 90-bit channel-coded block for transmission in a 2-ms EAGCH TTI to which an SF of 256 and QPSK apply, *creating a 60-bit rate-matched block.*” (emphasis added)) The specification repeatedly states that only exactly 60 bits are physically capable of being transmitted in this 2-ms TTI, and that what “rate-matching” does is match the number of bits in the block to the number of transmittable bits during the 2-ms TTI. (See JXM-3 [’644 patent] at 5:49 (“60 bits can be transmitted in the 2-ms TTI”).) Every “rate-matched block” transmitted in the ’644 patent is thus precisely 60 bits long. (See, e.g., JXM-3 [’644 patent] at 3:39-42, 3:56-59, 8:62-65, 10:55-58, 12:59-62, 14:59-62, 16:53-56, 18:63-66, 20:35-38, 22:3-6, 23:41-44, 25:13-16 (all puncturing or repeating bits to achieve “a 60-bit rate-matched block”). Thus, when claims 9 and 13 recite that a “rate-matched block” is extracted from a signal received from a Node B, the claims require extracting exactly 60 bits as a block (no more, no less). (*Id.*; see also (Order No. 63 at 48 (construing “rate-matched block” as “a block of channel-coded bits *that have been matched to transmittable bits on a physical channel* by puncturing or repeating bits at predetermined positions.”) (emphasis added).)

2. Proper Construction Of The Word “Extracting”

Because the private parties and Staff agreed that the word “extracting” required no construction, no record was developed on the meaning of this word at or before the hearing. To the extent the Commission now seeks to construe just this word, it should be given its plain and ordinary meaning: “removing for separate processing.”¹⁷ (See Ex. 1, Webster’s New World Dictionary of Computer Terms

¹⁷ As discussed in context of the full “extracting” limitation above, separate language of the claim defines *what* must be removed for separate processing. Specifically, claims 9 and 13 require removing “a **60-bit rate-matched block**” from the received signal for separate processing. Removing a bit from a signal requires making a hard decision about each sample of the signal—i.e., is what was received a binary “1” or a binary “0 REDACTED

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(1983) at 102 (“extraction” means “the process of *selecting various components* from a storage unit, as records from a file, fields from a record, or *bits from a word, in order to form a new unit that can be separately analyzed or processed*”) (emphasis added); Ex. 2, Longman Dictionary of American English (2004) at 316 (“extraction” means “the process of removing something from something else”).) This meaning is consistent with the term’s use in the claims, the teaching of the specification, and the file history.

First, the claims themselves recite “extracting a 60-bit rate-matched block from a signal received from a Node B,” and then proceed to recite separate processing that must take place on that block of 60 bits (i.e., “rate-dematching *the* rate-matched block...” (emphasis added)). The surrounding claim language thus demonstrates that “extracting” means “removing for separate processing.”

Second, the ’644 specification repeatedly explains “extracting” as removing a block of 60 bits from a received signal for the purpose of processing them separately. In Figure 4, for example, “physical channel demapper 404 *extracts* a rate-matched block from a 2-ms TTI in the received signal” and passes only that block of 60 bits (not symbols, softbits, or anything else) onward for subsequent processing. (JXM-3 [’644 patent] at 7:59-61, Fig. 4; *see also id.* at 3:67-4:1 (“a 60-bit rate-matched block is extracted from a signal received from a Node B”); 4:14-16 (“a physical channel demapper extracts a 60-bit rate-matched block from a signal received from a Node B”).) Indeed, the specification consistently gives this same meaning to “extracting” in multiple contexts. In explaining the operation of “CRC extractor 410,” for example, the specification states “CRC extractor 410 extracts a 16-bit CRC by modulo-2 operating the 16-bit UE-ID specific CRC with the 16-bit UE-ID 412 of the UE, and provides the extracted CRC ... to a CRC checker 414. The CRC checker 414 checks the 16-bit CRC to detect errors....” (JXM-3 [’644 patent] at 8:5-10.) In other words, “CRC extractor 410” removes the 16 bit CRC for separate processing by the “CRC checker 414.” (*Id.*)

Finally, there is no inconsistent file history because neither the applicants nor the examiner ever

To extract a block of 60 bits, 60 hard decisions are required.

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separately addressed this word's meaning.

B. Question 11[B]: There Is No Source Code Variable Representing A “60-Bit Rate-Matched Block” In The Accused Intel And Qualcomm Chips.

The accused Intel and Qualcomm chips never extract a “60-bit rate-matched block” from a Node B signal,¹⁸ and the reason Samsung failed at trial to identify any such variable in these chips' VHDL is because none exists.¹⁹ To the contrary, during cross-examination, Samsung's expert Dr. Min was repeatedly forced to concede that REDACTED

Accordingly, the ALJ correctly determined that Qualcomm's and Intel's chips do not perform the “extracting a 60-bit rate-matched block” limitation of claims 9 and 13. (ID at 110-11.)

1. The Qualcomm And Intel Chips Do Not “Extract[] A 60-Bit Rate-Matched Block.”

The ALJ's finding that the Qualcomm chip generates REDACTED and the Intel chip generates REDACTED is supported by overwhelming trial evidence. (ID at 110; *see also* REDACTED

¹⁸ As noted above, the ALJ construed the term “rate-matched block” to mean “a block of channel-coded bits that have been matched to the transmittable bits on a physical channel by puncturing or repeating bits at predetermined positions.” (Order No. 63 at 48.)

¹⁹ Because it is undisputed that the relevant functionality of the Qualcomm chips is the same in both the accused and alleged domestic industry devices, this brief focuses on the accused Qualcomm MDM6610 chip.

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It was similarly undisputed at trial that neither Qualcomm's REDACTED, nor Intel's REDACTED, is a "60-bit rate-matched block" as required by '644 claims 9 and 13. (REDACTED

REDACTED

The ALJ's determination the Qualcomm and Intel chips do not perform "extracting a 60-bit rate-matched block" was thus correct for at least two well-supported reasons.

First, neither chip performs "extracting" of "bits." (REDACTED.)

In order to "extract" a binary digit from a sample of a received signal, as discussed above, a receiver would have to make a final decision about whether it received a 0 or a 1. Neither Qualcomm nor Intel does so. (REDACTED.) Instead, these chips REDACTED

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A probability of a transmitted signal is not a bit (no more than a lottery ticket is \$1 million).

REDACTED

Second, no Apple product extracts a “**60**-bit” block from a Node B signal. This limitation requires extracting exactly 60 binary digits as a block. (Joint List of Dispute Claim Terms & Proposed Constructions, Oct. 21, 2011 at 6 (“bit” means “a binary digit”); REDACTED Apple’s products do not do so. (Tr. [Stark] 2294:4-2303:23.) Instead, they generate REDACTED

2. Samsung's Untimely Theories Only Underscore That Qualcomm And Intel Chips Do Not 'Extract[] A 60-Bit Rate-Matched Block.'

a) Samsung's Pre-Hearing Arguments Collapsed At Trial.

Dr. Min's opening expert report contended the Qualcomm and Intel chips practiced the claims' "extracting a 60-bit rate-matched block" limitation because they REDACTED Samsung's pre-hearing brief repeated this argument, arguing REDACTED

This argument collapsed at trial when Dr. Min conceded that REDACTED —not the "60-bit rate-matched block" the '644 claims require.

Faced with the collapse of its pre-hearing argument, Samsung has tried to invent a brand new theory (and several "facts") since trial: that REDACTED which are not part of the block. (*Id.*) Samsung's attempt to make up brand new theories after trial is barred by the Ground Rules of this Investigation. Moreover, Samsung's new theory is contrary to the evidence.

b) Ground Rule 7.2 Bars Samsung's New Theory.

Ground Rule 7.2 provides: "Any contentions not set forth in detail as required herein shall be deemed abandoned or withdrawn." This rule bars Samsung's new argument REDACTED

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Not only does Samsung's pre-hearing brief fail to make this argument, it in fact argues the exact opposite: REDACTED Permitting Samsung to raise new arguments after trial that are directly contrary to its pre-hearing brief would unfairly prejudice Apple and squander judicial resources.

c) **Samsung's New Argument Is Contrary To The Evidence.**

Samsung's new argument REDACTED is also contrary to the evidence, including its own expert's testimony. REDACTED And contrary to Samsung's argument, Dr. Min conceded on cross that REDACTED There is no such code because that is not how the Qualcomm or Intel chips operate.

Addressing an "extracting" type receiver like that claimed in '644 claims 9 and 13, Dr. Min conceded that "REDACTED By contrast, the Intel and Qualcomm chips concededly employ a different approach using a different REDACTED to convey more sophisticated information."²⁰ Dr. Min called this approach REDACTED – a form of decoding mentioned nowhere in the '644 patent. REDACTED

²⁰ How the Intel and Qualcomm baseband processors operate is not susceptible to dispute. Intel and Qualcomm engineers described how the VHDL code operated REDACTED Importantly, Dr. Min's cross examination confirmed that there was no dispute concerning the REDACTED

PUBLIC VERSION

REDACTED

Accordingly, the Commission should reject Samsung's newly-minted argument post-trial that REDACTED because it is: (1) waived (G.R. 7.2); (2) contrary to the Qualcomm and Intel code (REDACTED ID at 110.); (3) contrary to the testimony of Qualcomm's and Intel's witnesses (REDACTED); and (4) directly refuted by its own expert's admissions at trial. (REDACTED.)

For the foregoing reasons, no source code variable representing a "60-bit rate-matched block" extracted from a received signal ever exists in the accused Qualcomm or Intel chips.

QUESTION 12: With respect to the '980 patent, has Samsung waived all infringement and domestic industry allegations except for those based on claim 10? Identify by source code file name or other specific record designation the precise "dialing program" that Samsung relies upon to prove infringement and domestic

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industry with respect to claim 10. Also identify, using record evidence, the conditions that trigger execution of the “dialing program” in the relevant devices.

RESPONSE:

As detailed below, at the hearing, Samsung relied exclusively on new infringement and domestic industry theories, and therefore waived *all* infringement and domestic industry allegations for the '980 patent, including those based on claim 10; and in its petition for review briefing, Samsung only addressed its infringement and domestic industry hearing arguments for claim 10, thereby further waiving its arguments for all other claims. In addition, at the hearing, Samsung failed to identify a precise “dialing program” in the Apple or Samsung products (by source code file name or other record evidence), and cannot identify any record evidence detailing when any such “dialing program” supposedly executes.

A. Samsung Has Waived All Infringement and Domestic Industry Contentions For The '980 Patent—Including Those Based on Claim 10.

At the hearing, Samsung argued that Apple infringed four claims of the '980 patent (claims 5, 9, 10, and 13), and that Samsung’s own smartphones practiced two claims (claims 5 and 10)—arguments that the ALJ correctly rejected on the merits for multiple reasons. But it would be improper to reach those substantive issues because Samsung has waived its infringement and domestic industry arguments for all asserted claims—including claim 10—for the reasons set forth below.

First, midway through the hearing, Samsung alleged for the first time in this Investigation that the “phone program” (claims 5 and 9) and “dialing program” (claims 10 and 13) limitations were met by

REDACTED:

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(i) **REDACTED** in the accused Apple products (**REDACTED**); and (ii) **REDACTED** in its own domestic industry products (**REDACTED**).²¹ As Apple explained in its petition briefing, Samsung should be barred from relying on these late-disclosed theories—and because they were the *only* theories advanced at the hearing, Samsung has waived its infringement and domestic industry allegations for *all* asserted claims, *including claim 10*. (Apple’s Contingent Pet. for Review at 76-78 & n.27; Apple’s Resp. to Petitions for Review at 80-83; Apple Post-HB at 166-67; Apple Post-HRB at 94-97.)

Second, in its petition briefing, Samsung only sought Commission review (and responded to Apple’s contingent petition) for issues pertaining to claim 10. (Samsung Petition for Review at 57-70 (only addressing claim 10); Samsung Resp. Petition at 73-85 (same).)²² For that additional reason, Samsung has waived all infringement arguments for claims 5, 9, and 13, and all domestic industry arguments for claim 5. *See Certain Stringed Musical Instruments*, Inv. No. 337-TA-586, 2009 WL 5134139, Comm’n Op. (“*Certain Stringed Musical Instruments*”) at 18 (2009) (holding arguments not made in petition are waived); 19 C.F.R. § 210.43(b)(2) (same).

Finally, even with respect to claim 10, Samsung did not seek Commission review of the ALJ’s critical findings that Samsung had failed to: (i) identify a “dialing program” in the Apple or Samsung products; or (ii) offer any evidence detailing when such a program might execute. (ID at 165-66, 567-70,

²¹ The ALJ criticized Samsung for this “troublesome” shift in position, but given the strength of Apple’s defenses on the merits, he did not decide whether Samsung should be procedurally barred from advancing its new theories. (ID at 158 n.38 (“Because Mr. Cole’s testimony has been unconvincing, mutable, undeveloped, and poorly supported, as noted above, it is not necessary to reach the question of whether it should be stricken on procedural grounds.”); *id.* at 159 (“This change in infringement theory is troublesome and lacks substance and credibility.”); *id.* (“Apple also persuasively makes the point that Samsung and Mr. Cole did not previously assert that specific PDA functions (CDX-3.53) are part of this claimed ‘phone program’”)). In fact, this “troublesome” shift continued even after the ALJ issued his Initial Determination. (*E.g.*, Samsung Resp. Petition at 74 (“Samsung has consistently and timely identified **REDACTED** as the ‘dialing program.’”)).

²² In its opening post-hearing brief, Samsung alleged infringement by Apple for all four asserted claims, and alleged a domestic industry with respect to claims 5 and 10. After reviewing Apple’s opening post-hearing brief, however, Samsung abandoned its allegations for claims 5, 9, and 13 in its post-hearing reply brief. (Samsung Post-HRB at 74 (“[T]he ‘loading’ step in claim 5 . . . is not even relevant to *the claim for which Samsung seeks review (claim 10)*”) (emphasis added); *id.* at 73-85 (only addressing claim 10).)

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573; Samsung Petition for Review at 58-64 (only addressing claim construction issues for the “dialing program” limitation).) In view of this failure to petition, Samsung cannot allege now that it did, in fact, meet its burden to identify a “dialing program” in the Apple and/or Samsung products—meaning that Samsung cannot prevail on its infringement or domestic industry arguments for claim 10 under any possible scenario. *See Certain Stringed Musical Instruments* at 18; 19 C.F.R. § 210.43(b)(2).

Therefore, Samsung has waived its infringement and domestic industry contentions for the ’980 patent, including those based on claim 10.

B. Samsung Failed To Identify A “Dialing Program” In The Apple And Samsung Products.

In his Initial Determination, the ALJ concluded that Samsung had failed to identify any “dialing program” in the accused Apple products or Samsung domestic industry products—by source code or otherwise. (ID at 165-66 (“[For the Apple products], *Samsung has not persuasively or credibly demonstrated what the ‘program’ is . . .*”) (emphasis added); *id.* at 568-69 (finding Samsung “failed to adequately or persuasively explain . . . *what the alleged ‘phone program’ in the DI Products is*”) (emphasis added).)²³ That correct conclusion should be adopted for two reasons.

First, as noted above, Samsung did not even petition for review of the ALJ’s finding. Therefore, Samsung is procedurally barred from arguing now—contrary to the ALJ’s finding—that it did identify a “dialing program” in the Apple and Samsung products. *See Certain Stringed Musical Instruments* at 18; 19 C.F.R. § 210.43(b)(2).

Second, the record confirms the ALJ’s conclusion on the merits. At the hearing, Samsung’s expert, Mr. Cole, merely alleged that the “dialing program” limitation was met by **REDACTED**

²³ Although this latter citation refers to the “phone program” of claim 5, the ALJ incorporated this conclusion into his analysis of the “dialing program” limitation of claim 10 (because Samsung treated the “dialing program” and “phone program” as identical for purposes of its infringement and domestic industry arguments). (ID at 165-66, 573.)

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in the accused Apple products, and by **REDACTED** in the Samsung domestic industry products—without ever identifying **REDACTED**. (Tr. [Cole] at 2381:16-2382:23, 2408:18-22, 2424:13-18, 2447:20-2448:2; CDX-03.47C; CDX-03.83C; CDX-03.108C; CDX-03.147C.)

Samsung and Mr. Cole also failed to dispute the testimony of Apple’s expert, Dr. Joakim Ingers, and Apple engineer, Justin Santamaria—who confirmed that no person of ordinary skill in the art would consider **REDACTED**

—to be a “dialing program,” or a “program” of any kind. (Apple’s Contingent Pet. for Review at 78; Tr. [Santamaria] at 2593:22-2595:14; Tr. [Ingers] at 2825:11-18, 2827:8-24.)²⁴

C. Samsung Failed To Identify The Conditions That Supposedly Trigger Execution of A “Dialing Program” In The Apple Or Samsung Products.

Beyond Samsung’s inability to identify a “dialing program” in the Apple and Samsung products, the ALJ correctly concluded that the record is devoid of any proof as to *how or when* any such “dialing program” would execute—including whether it would execute “when a PDA function is utilized in said smart phone,” as required by claim 10. (ID at 165-66 (“[For the Apple products], Samsung has not persuasively or credibly demonstrated what the ‘program’ is *or how it is executed when a PDA function is utilized.*”) (emphasis added); *id.* at 570 (“Mr. Cole again failed to adequately explain *how the ‘elements’ or even what parts of the phone program that he identified will execute [in the Samsung products]*”) (emphasis added).)

No Samsung fact witness appeared at the hearing to explain the operation of Samsung domestic industry products—including the specific circumstances when **REDACTED**

²⁴ Nor can Samsung overcome this lack of specificity by arguing that the limitation is somehow met under the doctrine of equivalents. The ALJ properly rejected Samsung’s equivalents arguments for the “dialing program” limitation, finding that they were so untethered from the record they “bordered on sanctionable behavior.” (ID at 164, 570-71.) By failing to seek review of that finding, Samsung has waived any equivalents arguments for the “dialing program” limitation.

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that Mr. Cole identified will execute—and Mr. Cole did not even try to fill in that critical evidentiary gap. Moreover, the undisputed record evidence confirms that the accused Apple products **REDACTED**. (Tr. [Ingers] at 2817:17-23, 2821:12-22; Tr. [Santamaria] at 2560:3-16, 2563:23-2564:10, 2571:15-2573:14, 2575:7-2576:18; Apple’s Contingent Pet. for Review at 90-93.)

QUESTION 13: With respect to the ’980 patent, if the Commission were to construe “dialing icon” to require a “pictorial element,” what record evidence demonstrates that Samsung’s alleged domestic industry products meet that limitation?

RESPONSE:

The record evidence demonstrates that Samsung’s alleged domestic industry products do not meet the “dialing icon” limitation, even under a “pictorial element” construction.

In its petition briefing, Samsung alleged that its domestic industry products meet the “dialing icon” limitation of claim 10 based on: (i) hyperlinked phone numbers; (ii) the green “Call” button; (iii) the Web application’s “Dial...” button; and (iv) a Messaging application menu item. (Samsung Petition for Review at 67-68.) Samsung cannot prevail on any of those arguments if the Commission (correctly) construes the term “dialing icon” to require a “pictorial element.”

First, as Dr. Ingers and Mr. Santamaria testified at the hearing, and as the ALJ correctly found, hyperlinked phone numbers are nothing more than underlined blue text—with no picture element at all. (Tr. [Santamaria] at 2603:19-2604:10, 2611:1-9; Tr. [Ingers] at 2824:21-2825:3; ID at 160-62 & n.41.) In fact, even the sole inventor of the ’980 patent admitted that **REDACTED**

(JX-0024C [2/3 Moon] at 11:25-12:8, 12:13-25, 13:5-17; Apple’s Resp. to Petitions for Review at 88.)²⁵

Second, although the ALJ correctly concluded that the green “Call” button contains a picture of a telephone (ID at 569), Mr. Cole never identified what displays that button. Therefore, even under a “pictorial element” construction of “icon,” Samsung still cannot prove that the “Call” button is the

²⁵ Samsung argued for the first time in its petition for review—without explanation—that a hyperlinked phone number contains “pictorial elements.” (Samsung Petition for Review at 67.) That argument should be rejected as untimely, and also as lacking any record support.

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“dialing icon” of claim 10—which must be displayed by the “dialing program”: “a dialing program for . . . displaying . . . a dialing icon when a PDA function is utilized in said smart phone.” (JXM-5 [’980 patent] at claim 10; Tr. [Cole] at 2487:11-16 (REDACTED).)

Samsung also cannot rely on the “Call” button as the “dialing icon” of claim 10 because, as the ALJ correctly found, a user cannot select a phone number to dial after pressing the “Call” button. (JXM-5 [’980 patent] at claim 10 (requiring “switching a display screen into a dialing state *when said dialing icon is selected*”) (emphasis added); ID at 573-75.) Therefore, if the Commission construes “dialing icon” to require a “pictorial element,” the “Call” button would not meet the “dialing icon” requirement of claim 10. (Apple’s Contingent Pet. for Review at 84.)

Third, Samsung also cannot establish that the Web application’s “Dial...” button or the Messaging application’s menu item meet the “dialing icon” limitation of claim 10. The Web application’s “Dial...” button is a textual item that lacks any pictorial component (RX-0091; CDX-03.095; CDX-03.123; ID at 160-62), and Samsung waived the ability to rely on the Messaging application menu item by failing to identify it as a “dialing icon” in its pre-hearing brief. *See* Ground Rule 7.2. In addition, because Samsung did not introduce *any* evidence explaining what software displays the Web application’s “Dial...” button or the Messaging application’s menu, it cannot prove that either is displayed by what Samsung calls the “dialing program,” as claim 10 requires. (Apple’s Resp. to Petitions for Review at 88-89.)

Finally, Samsung cannot overcome these obstacles by alleging that its products practice the “dialing icon” requirement under the doctrine of equivalents. The ALJ correctly concluded that Samsung’s doctrine of equivalents argument with respect to hyperlinked phone numbers was entirely “conclusory” (ID at 165), and Samsung did not offer any evidence or equivalents argument directed to its other supposed “dialing icons.” (Apple’s Resp. to Petitions for Review at 89.) In addition, if the Commission construes “dialing icon” to require a pictorial element, Samsung would have to (improperly) read “icon” out of the claim to cover hyperlinked phone numbers and its other purely textual supposed

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“dialing icons.” (Apple’s Resp. to Petitions for Review at 89-90.)

II. ANALYSIS OF REMEDY AND BONDING

Apple submits that, if a violation is found and a remedial order issued, (1) any remedy should include a certification provision and an exemption for imported spare parts and replacement devices, and (2) no bond should be required for any products covered by the order.

A. Any Remedy Should Contain A Certification Provision And An Exemption For Service, Repair, Or Replacement Articles.

The ALJ found no violation, and therefore concluded that no remedy was warranted. (Recommended Determination (“RD”) at 2.) In the event a violation were found, he recommended issuance of a limited exclusion order and a cease-and-desist order (*id.* at 2-5). The ALJ acknowledged, but did not specifically address, Apple’s request that any remedy contain an exemption for the service, repair, or replacement of previously imported articles (*id.*).

The Commission has recognized in similar cases involving mobile phones and other products that the public interest weighs in favor of a service and repair exception to prevent disruption to the domestic business operations of innocent third parties and consumers. *See Certain Mobile Devices, Associated Software, and Components Thereof*, Inv. No. 337-TA-744, Comm’n Op. at 21-22 (June 5, 2012); *see also Certain Liquid Crystal Display Devices*, Inv. No. 337-TA-631, Comm’n Op. at 27 (July 14, 2009) (“LCD Devices”) (“the public interest weighs in favor of an exemption to allow importation of service and replacement parts”). Accordingly, any remedial order should except service, repair, or replacement articles imported for use in servicing, repairing, or replacing the accused Apple products under warranty or an insurance contract (whether the warranty or contract is offered by Apple, a carrier, or by a third party) for an identical article that was imported prior to the effective date of the remedial order. *See Certain Mobile Devices, supra*, Inv. No. 337-TA-744, Comm’n Op. at 21-22 (June 5, 2012); *id.*, Limited Exclusion Order ¶ 1 (May 18, 2012).

Similarly, where practice of a patent is not easily determined by visual inspection, the Commission’s exclusion orders normally authorize U.S. Customs and Border Protection (CBP) to accept

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a certification that the importer's products are not covered by the order. *Certain Mobile Devices, supra*, Inv. No. 337-TA-744, Comm'n Op. at 21 (June 5, 2012) ("it has been Commission practice for the past several years to include certification provisions in its exclusion orders to aid CBP"). Practice of the patents asserted in this investigation is not readily determined by visual inspection, and therefore any remedy should contain a certification provision. A certification provision would also assist CBP in the administration of the exemption for repair and replacement articles. *Certain Mobile Devices, supra*, Inv. No. 337-TA-744, Comm'n Op. at 21.

B. No Bond Should Be Required In Any Remedial Order.

The purpose of a bond for covered products entered or sold during the Presidential Review period is to protect the complainant from injury. 19 U.S.C. § 1337(j)(3); 19 C.F.R. § 210.50(a)(3). The legislative history and Commission precedent further instruct that the bond should be set at a level no more than sufficient to "offset any competitive advantage resulting from the unfair method of competition or unfair act enjoyed by persons benefiting from the importation of the article" (S. Rep. No. 1298, 93d Cong., 2d Sess. 198 (1974)); "[b]onding is not to be imposed as a deterrent to importation during the Presidential review period, but rather to offset any competitive advantage enjoyed by the infringing imports." *Certain Dynamic Random Access Memories, Components Thereof And Products Containing Same*, Inv. No. 337-TA-242, Comm'n Op. at 95 (Sept. 21, 1987). Furthermore, the complainant bears the burden of demonstrating both the need for and amount of the requested bond. *See LCD Devices, supra*, Inv. No. 337-TA-631, Comm'n Op. at 27-28 (July 14, 2009) (finding that complainant "failed to meet its burden to establish that a 100% bond is appropriate" and setting no bond during Presidential review period); *Certain Rubber Antidegradants, Components Thereof, and Products Containing Same*, Inv. No. 337-TA-533, Comm'n Op. at 39-49 (July 21, 2006) (same). Here, the appropriate bonding rate is zero for all categories of products. Samsung has shown neither a competitive advantage nor lower prices for any of the accused Apple products.

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With respect to the accused Apple iPhones, the undisputed evidence shows that the average selling price of the Apple iPhone REDACTED the competing Samsung domestic industry phones REDACTED

. (Apple Post-HB at 271; Staff Post-HB at 151; RDX-10-3C; Tr. [Prowse] at 2156:18-25); Tr. [Mulhern] at 1817:24-1818:2.) The ALJ rejected Samsung’s claim that the available evidence on pricing of competing products was insufficient, and, finding that Samsung had not met its burden to support its request for a 100% bond rate, recommended a zero bond rate for any order on Apple’s accused mobile phones. (RD at 5-6.)

With respect to Apple’s other accused products – its tablet computers (iPads) and portable music devices (iPod Touch), for which Samsung identified no competing products – the ALJ recommended a 100% bond rate, even while acknowledging such a rate was “arbitrary” and not supported by any evidence that a 100% rate would be necessary to protect Samsung from injury. (RD at 7 & n.103.)

Apple submits that it is complainant’s burden to support the requested bond rate, and the appropriate rate for all products in this investigation is zero. As the Commission has reminded complainants, “failure to satisfy their burden to support bonding may result in no bonding at all.” *Certain Personal Data and Mobile Communication Devices and Related Software*, Inv. No. 337-TA-710, Comm’n Op. at 85 (Dec. 29, 2011). Samsung failed to present any evidence of a reasonable royalty rate or any other support for the requested 100% rate, and that rate cannot be justified in the context of the patents or the products at issue in this investigation. As discussed above, REDACTED.

Apple considers that offer to violate Samsung’s FRAND commitments, as the rate is unfair, unreasonable, and discriminatory, and far in excess of a reasonable royalty rate. (Apple Post-HB at 138.) Nevertheless, REDACTED demonstrates that the requested rate of 100% is wholly inappropriate, and far in excess of a reasonable royalty. Given the evidence that Apple’s competing products sell for REDACTED Samsung’s domestic industry products, any bond should be set at zero.

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Dated: December 3, 2012

Respectfully submitted,
Apple Inc.

By its counsel,

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EXHIBIT 1

bhm

**Webster's
NewWorld
DICTIONARY
OF
COMPUTER
TERMS**

Compiled by

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were specified: a LINKAGE EDITOR is used to resolve external references

external sort a sort in which an external storage device is used to store intermediate groups of sorted items when the entire group is too large to be sorted in main memory: the intermediate groups are then merged in several steps to form the final sorted group once each has been internally sorted Compare INTERNAL SORT

external storage AUXILIARY STORAGE

external symbol dictionary a symbol table containing the symbolic names of the various modules of a program and their addresses

extraction the process of selecting various components from a storage unit, as records from a file, fields from a record, or bits from a word, in order to form a new unit that can be separately analyzed or processed

F

F in the HEXADECIMAL NUMBER SYSTEM, the symbol that corresponds to the decimal number 15

facsimile FAX

fail-safe designating a system that continues to operate after a malfunction occurs, usually with a reduction in speed

fail-soft designating a computer system that will continue operating at a reduced level when a part of the system fails, but that will provide substantial warning so that irrecoverable loss of data does not occur

false code **1** ILLEGAL CHARACTER **2** an instruction specifying an ILLEGAL OPERATION

fanfold paper CONTINUOUS: at the perforations in alternate

fatal error an error in a program that results in the termination of execution

father file see GENERATION

fault a physical condition that causes a device to fail to operate or a circuit

FAX short for FACSIMILE communication lines of various types, in the form of electrical signals, where they are transmitted as a reproduction of a picture on special paper

FDM abbreviation for FREQUENCY DIVISION MULTIPLEXING

feasibility study a study that estimates the costs, benefits, and risks of a proposed project, in order to determine whether it is worth pursuing

feedback data produced by a program and used as input to the program, as to modify its operation. It is often used to have produced the output

fetch **1** to bring an instruction from main memory to the CPU **2** loosely, to bring data from an external storage device

fetch-ahead the procedure of fetching instructions before the last instruction is executed

fetch cycle **1** the time interval between the time an instruction or data is being fetched and the time it is being executed

EXHIBIT 2

LONGMAN

Dictionary of American English

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THESAURUS

expensive, high, pricey, overpriced, astronomical, exorbitant
→ see Thesaurus box at EXPENSIVE

ex·tra¹ /'ekstrə/ *adj.* 1 [only before noun] more than the usual or standard amount of something: *a large mushroom pizza with extra cheese* | *The company gives employees extra time off to take care of sick family members.*

THESAURUS

more, another, additional, further
→ see Thesaurus box at MORE²

2 [not before noun] if something is extra, it is not included in the price of something and you have to pay more for it: *Steaks are \$9 a pound. Shipping is extra.*

extra² *adv.* 1 in addition to the usual things or the usual amount: *You have to pay extra if you want to travel first class.* 2 used when emphasizing an adjective or adverb: *If you're extra good, I'll buy you an ice cream.* | *Henry's been working extra hard.*

extra³ *n.* [C] 1 something that can be added to a product or service and that makes it cost more: *The tour does not include extras, such as meals.*

THESAURUS

addition, additive, supplement
→ see Thesaurus box at ADDITION

2 an actor who has a small unimportant part in a movie

ex·tract¹ /'ik'strækt/ *v.* [T] 1 formal to remove something from a place or thing: *I'm having my wisdom teeth extracted.* | *Olive oil is extracted from green olives.* 2 to make someone give you information, money, etc. that s/he does not want to give: *The police couldn't extract any information from him.*

ex·tract² /'ekstrækt/ *n.* 1 [C] a small part taken from a story, poem, etc.: *an extract from the article* 2 [C,U] a substance that is removed from a plant: *vanilla extract*

ex·trac·tion /'ik'strækʃən/ *n.* 1 [C,U] the process of removing something from something else: *the extraction of coal* 2 **be of French/Irish etc.** **extraction** to be from a family that is originally from France, Ireland, etc., though you were not born in that country

ex·tra·cur·ric·u·lar /,ekstrəkə'rikyələ/ *adj.* [only before noun] extracurricular activities are those that you do for fun and are not part of the usual work you do for school

ex·tra·dite /'ekstrə,dait/ *v.* [T] to send someone who may be guilty of a crime back to the country where the crime happened —**extradition** /,ekstrə'diʃən/ *n.* [C,U]

ex·tra·ne·ous /'ik'streiniəs/ *adj.* formal not directly related to a particular subject: *extraneous details*

ex·traor·di·nar·y /'ik'strɔ:dn,əri/ *adj.* very unusual, special, or surprising: *an extraordinary talent* | *an extraordinary event*

THESAURUS

surprising, amazing, shocking, astonishing, astounding, staggering, stunning
→ see Thesaurus box at SURPRISING

ex·trap·o·late /'ik'strəpə,leit/ *v.* [I,T] formal to use facts about a current situation in order to say what might happen in another

ex·tra·ter·res·tri·al /,ekstrətə'restriəl/ *adj.* in or from a place that is not the Earth: *the search for extraterrestrial life* —**extraterrestrial** *n.* [C]

ex·trav·a·gant /'ik'strævəgənt/ *adj.* 1 spending or costing too much money: *extravagant parties* 2 extravagant claims, promises, etc. are not likely to be true —**extravagantly** *adv.* —**extravagance** *n.* [C,U]

ex·treme¹ /'ik'strim/ *adj.* 1 very great in degree: *extreme violence* | *Mountain climbers face extreme danger.* 2 very unusual and severe or serious: *Mr. Wong uses extreme methods to discipline his students.* | *In extreme cases, the spider's bite can kill.* 3 extreme opinions are very strong and most people think they are unreasonable: *the party's extreme left wing* 4 **extreme sport/skiing etc.** a sport that is done in a way that is more dangerous than usual

extreme² *n.* 1 [C] something that is much greater, more severe, etc. than usual: *the extremes of wealth and poverty* | *The temperature has gone from one extreme to another* (=from hot to cold or cold to hot). | *People were willing to go to extremes* (=do something to the greatest possible extent) *to prevent the prison from being built near their homes.* 2 **in the extreme** extremely: *His new movie is violent in the extreme.*

ex·treme·ly /'ik'strimli/ *adv.* to a very great degree: *She's extremely pretty.* | *an extremely difficult job*

ex·trem·ist /'ik'strimist/ *n.* [C] disapproving someone with very strong political or religious opinions: *right-wing extremists* —**extremist** *adj.* —**extremism** *n.* [U]

ex·trem·i·ty /'ik'streməti/ *n.* plural **extremities** [C] 1 the part that is furthest from the center of something: *the city's northern extremity* 2 **extremities** [plural] one of the parts of your body that is furthest away from the center, for example your fingers or toes

ex·tri·cate /'ekstrə,kert/ *v.* [T] to get someone out of a place or a difficult situation: *They couldn't extricate themselves from the huge crowd of people.*

ex·tro·vert·ed /'ekstrə,vətɪd/ *adj.* confident and

enjoying being verted] —**extrove**

THESAURUS

sociable, outgoing
→ see Thesaurus

ex·u·ber·ant /'igzə,bə,rənt/ *adj.* excited, and full of —**exuberance** *n.*

ex·ude /'igzəd/ *v.* to have a lot of a particular quality: *She exuded confidence.* | *He exuded confidence.*

ex·ult /'igzʌlt/ *v.* to be very happy and proud of something: *The people exulted over their victory.* —**exultation** *n.* [C,U]

eyebrow



eyelashes

eye¹ /aɪ/ *n.* [C]

1 **SEE** one of the two organs that see with: *Gina has one eye.* | *Gina has one eye.* | *I have one eye.* | *He spoke with tears in his eyes.* | *blue-eyed*

COLLOCATIONS

If you **lower** your eyes, you are looking down. Your eyes **narrow** when you are concentrating on something carefully.

Your eyes **widen** if you are surprised or excited.

Your eyes **sparkle** if you are happy.

2 **SEE/UNDERSTAND** to judge, or understand: *She looked at him and understood what he was saying.* | *He spoke through the eyes of a child.*

3 **keep an eye on** someone or something to watch someone or something: *Can you keep an eye on the store?*

4 **lay/set eyes on** someone or something, especially for the first time: *I laid eyes on her when I was a child.*

5 **cannot take your eyes off** someone or something to stop looking at someone or something because it is so attractive: *I just can't take my eyes off her.*

In the Matter of CERTAIN MOBILE ELECTRONIC DEVICES, INCLUDING WIRELESS COMMUNICATION DEVICES, PORTABLE MUSIC AND DATA PROCESSING DEVICES, AND TABLET COMPUTERS

Inv. No. 337-TA-794

U.S. International Trade Commission; Before the Honorable E. James Gildea

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