Nos. 18-1363, 18-1380, 18-1382, 18-1732

United States Court of Appeals for the Federal Circuit

TCL COMMUNICATION TECHNOLOGY HOLDINGS LIMITED, TCT MOBILE LIMITED, TCT MOBILE (US) INC.,
Plaintiffs-Appellees,
v.
TELEFONAKTIEBOLAGET LM ERICSSON, ERICSSON INC.,
Defendants-Appellants

Appeal from the United States District Court for the Central District of California in No. 8:14-cv-00341-JVS-DFM, Judge James V. Selna

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ERICSSON, INC., TELEFONAKTIEBOLAGET LM ERICSSON,
Plaintiffs-Appellants,
v.
TCL COMMUNICATION TECHNOLOGY HOLDINGS LIMITED, TCT MOBILE LIMITED, TCT MOBILE (US) INC.,
Defendants-Appellees

Appeals from the United States District Court for the Central District of California in No. 8:14-cv-02370-JVS-DFM, Judge James V. Selna

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NON-CONFIDENTIAL BRIEF FOR APPELLEES TCL COMMUNICATION TECHNOLOGY HOLDINGS LIMITED, TCT MOBILE LIMITED, AND TCT MOBILE (US) INC.

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FORM 9. Certificate of Interest **Form 9 Rev. 10/17**

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

TCL Communication Technology v. Telefonaktienbolaget LM

Case No. 18-1363, -1732, -1380, -1382

CERTIFICATE OF INTEREST

Counsel for the:
☐ (petitioner) ☐ (appellant) ☐ (respondent) ▣ (appellee) ☐ (amicus) ☐ (name of party)

TCL Communication Technology Holdings Ltd., TCT Mobile Limited, and TCL Mobile (US) Inc.

certifies the following (use "None" if applicable; use extra sheets if necessary):

1. Full Name of Party Represented by me	2. Name of Real Party in interest (Please only include any real party in interest NOT identified in Question 3) represented by me is:	3. Parent corporations and publicly held companies that own 10% or more of stock in the party
TCL Communication Technology Holdings Ltd.	None	None
TCT Mobile Limited	None	TCL Communication Technology Holdings, Ltd.
TCT Mobile (US) Inc.	None	TCL Communication Technology Holdings, Ltd.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court **(and who have not or will not enter an appearance in this case)** are:

The following attorneys from Sheppard Mullin Richter & Hampton LLP who entered appearances in the district court litigation: Allan W. Jansen, Daniel Taskalos, Lai L. Yip, Michael Murphy (formerly with Sheppard Mullin LLP), Nam Kim, Ryan P. Cunningham, and William J. Blonigan.

Bostwick Law: Gary L. Bostwick.

5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal. *See* Fed. Cir. R. 47. 4(a)(5) and 47.5(b). (The parties should attach continuation pages as necessary).

1) Ericsson Inc., et al. v. TCL Communication Technology Holdings Ltd., et al.,
Case No. 2:15-cv-02370-JVS-DFM (consolidated with 8:14-cv-00341-JVS-DFM)
2) TCL Communication Technology v. Telefonaktiebolaget LM, Case No. 18-1732 (consolidated with 18-1363)
3) Ericsson, Inc. v. TCL Communication Technology, Case No. 18-1380 (consolidated with 18-1363)
4) Ericsson, Inc. v. TCL Communication Technology, Case No. 18-1382 (consolidated with 18-1363)

11/1/2018
Date

/s/Stephen S. Korniczky
Signature of counsel

Please Note: All questions must be answered

Stephen S. Korniczky
Printed name of counsel

cc: All counsel of record via ECF

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CONFIDENTIAL MATERIAL OMITTED

Material has been redacted in the Non-Confidential Brief for Appellees TCL Communication Technology Holdings Limited, TCT Mobile Limited, and TCT Mobile (US) Inc. This material is confidential commercial information pursuant to the Confidentiality Order entered by the district court on December 8, 2014. Appx1431. Redacted material on pages 42, 43, 44, 48, 49, 50, 54, 55, and 59 contain confidential information regarding commercial patent-license royalties.

TABLE OF AUTHORITIES

Statutes

Other Authorities

STATEMENT OF RELATED CASES

Pursuant to Federal Circuit Rule 47.5, Appellees TCL Communication Technology Holdings Limited, TCT Mobile Limited, and TCT Mobile (US) Inc. (collectively, "TCL") note that:

(a) there have been no other appeals in this case; and

(b) there are no other cases pending in this or any other court that will directly affect or be directly affected by this Court's decision in this case.

STATEMENT OF THE ISSUES

1. Whether the court properly determined there was no basis for a jury trial because the relief sought and awarded consisted of specific performance and injunctive relief, both of which are equitable.

2. Whether the court committed clear error in determining the fair, reasonable, and non-discriminatory ("FRAND") royalty rates based on the combined results of the top-down and comparable license analyses, both of which were consistent with Ericsson's historical positions and supported by the evidence.

STATEMENT OF THE CASE

TCL submits this short statement to briefly describe the parties and their dispute. A more detailed discussion of the procedural history underlying why a non-jury trial was held is set forth at page 10.

I. The Parties

TCL makes and sells 2G, 3G, and 4G devices, which are marketed under the "TCL," "Alcatel," and "BlackBerry" brands. Appx56540, Appx56548; Appx56609. TCL sells a wide variety of products, including entry-level and high-end smartphones and basic feature phones. Appx56548-56; Appx56609. It has sales in over 170 countries, and competes in both emerging and developed markets. Appx56609; Appx56616-43. TCL ranked in the top seven in the world by mobile phone sales volume in 2015, and competes with other top global firms like Samsung, Apple, Huawei, and LG. Appx56609-25; Appx54065-6.

Ericsson is best known for its network equipment business. Appx57863. Ericsson formerly sold mobile phones, but discontinued that business in late 2011. Appx57864; Appx53917-8; Appx79446. Ericsson also has a thriving licensing business. Appx59216-17, citing Appx101510-11; Appx53733-4; Appx60472. The profit margin for Ericsson's licensing business exceeds 80%. Appx53735-6; Appx63626. Ericsson's licensing business benefits significantly from the higher volume of handsets sold due to standardization. Appx53739-41; Appx101510-11.

For many years, Ericsson was a vocal public advocate for calculating FRAND royalty rates using a "top-down" approach consisting of percentage running royalty rates calculated as a proportional share of a reasonable maximum aggregate royalty, calling this "the prevalent industry interpretation of FRAND." Appx76093; Appx53690; Appx72128-30; Appx75486; Appx65705. Ericsson committed to a 6-8% maximum aggregate royalty for LTE, and a "modest single digit" maximum aggregate royalty for W-CDMA. Appx76093; Appx65705.

Ericsson used the above approach and commitments in setting its royalty rates. Appx53710-11; Appx63557; Appx63826-27. For example, Ericsson claimed it owned or would own 25% of all LTE patents, and thus set its early 4G royalty rate at 2.5% of the price of the phone (2.5% being one-quarter of a 10% aggregate). Appx53711-12, 16-18. Ericsson's proportional share claim was based on its tally of the number of accepted technical contributions it had made as part of the standard-setting process. Appx53711-18; Appx63558-59.

II. ETSI's FRAND Obligation

The European Telecommunications Standards Institute ("ETSI")—directly and through participation in the 3rd Generation Partnership Project ("3GPP")—is the organization responsible for the 2G, 3G, and 4G standards. Appx57870-71; Appx56458. ETSI's Intellectual Property Rights ("IPR") Policy states that members must declare patents which are or may become essential to an ETSI standard, and commit they are "prepared to grant irrevocable licenses on fair, reasonable and non-discriminatory ('FRAND') terms and conditions . . . ." Appx72171–72.

The development of standards comes with many benefits, including enabling markets to flourish based on the interoperability of devices, providing revenues to manufacturers and standard-essential patent ("SEP") owners, and expanding consumer choice. Appx43672-73, 677, 680-83; Appx44008-22; Appx43851, 53-56; Appx43934-38. But standards also come with serious hazards, including the risk of "hold-up" and price discrimination that comes once the patent owner obtains a monopoly by locking its technology into a standard which then must be used by all implementers. Appx43680-83; Appx44010-22; Appx43853-56; Appx43935-38. ETSI was heavily motivated by both concerns when enacting its IPR Policy. Appx43687-94 citing Appx71958-60, Appx81326, Appx71979-81, Appx81296-97, Appx70431-36, Appx71540, Appx81241-41; Appx47944; Appx52387-95; Appx47374-79; Appx119227-28.

III. The Pre-Lawsuit History Between the Parties

In March 2007, two TCL affiliates entered into seven-year 2G licenses with Ericsson. Appx62790, Appx62805; Appx44530. They were among the first Chinese companies to do so. Appx131614. TCL and Ericsson began negotiating a 3G license in 2011. Appx63563-4. In 2012, Ericsson began suing TCL for alleged infringement of Ericsson's SEPs, filing at least 11 lawsuits in six countries. Appx6640-43. Ericsson's lawsuits were consistent with its strategy of using litigation to pressure potential licensees into a deal. Appx62735, § 5.3; *see also* Appx53688-90.

TCL continued to negotiate, and in 2013 the parties began to address 4G rates. Appx63568-69. Ericsson's royalty rates came down as the parties negotiated. Appx63568-78; Appx2768-69, ¶ 6.1. Ericsson repeatedly sought to justify its percentage royalty rates as being supported by a top-down analysis, as well as its licenses with other manufacturers like Samsung, LG, and HTC. Appx63830-31; Appx63839-40; Appx63554-62; Appx524056; Appx53870-73.

IV. The Lawsuit and the Court's Decision

On March 5, 2014, with the expiration date of the 2G license looming, TCL sought judicial assistance by initiating this action. Appx443; Appx641;

Appx62790-804; Appx56704, ¶ 60. Among other things, TCL alleged Ericsson had breached its FRAND obligation, and sought a determination of the FRAND terms and conditions. Appx683-85. Ericsson likewise asked the court to determine the FRAND terms and conditions, and order that TCL enter into a license with Ericsson on the terms set by the court. Appx1405. During the course of the litigation, all of the parties' claims for damages were stayed or dismissed. Appx5146-7; Appx6653-54; Appx6663-6; Appx6674-7; Appx28203-04; Appx38789; Appx38816. In addition, no claims or defenses related to patent infringement were tried. Appx46362; Appx29.

Trial was conducted by reference to Ericsson's "FRAND contentions," which took the form of Option A and B license proposals. Appx2718-78; Appx4795-4857; Appx38768-70. If either offer was FRAND, it would be imposed on TCL; if neither was FRAND, then the court would revise the terms to make the offer FRAND. Appx38768-70. The release payment was merely a contractual term set forth in Option A and B. Appx3191, lines 4-5; Appx2748, § 7.1(a), and Appx2768, § 6.1(a). All agreed the court's task was equitable, and the resulting license would take the form of an injunction. Appx1892, lines 22-27; Appx2567-70; Appx3190, lines 23-27; Appx131743, lines 5-17; Appx131867-68; Appx131897-98.

The court conducted a 10-day trial in February 2017, receiving direct testimony from expert and fact witnesses via 41 declarations totaling more than 2,500 pages of testimony, plus 2,360 exhibits. The trial days consisted of cross-examination and re-direct examination of the witnesses. The parties then submitted proposed Findings of Fact and Conclusions of Law. Appx51369-589. The court later heard closing arguments after giving the parties a list of ten questions. Appx54545-664.

To assess the FRAND royalty rate, the court undertook a "top-down" analysis based on Ericsson's proportional share of a maximum aggregate reasonable royalty rate, as well as a comparable license analysis for TCL's major global competitors, including Apple, Samsung, HTC, LG, and Huawei. Despite its prior endorsement, Ericsson conspicuously did not present any top-down analysis at trial, or try to establish its proportional share of the SEPs. Appx53692-93, 716-18. The court analyzed the rates derived from both approaches, and set FRAND royalty rates for the U.S., Europe, and rest of the world ("ROW"). Appx120-30. After receiving further input from the parties, the court issued its Amended Final Judgment and Injunction, which memorialized the terms of the license. Appx1-25. Ericsson then filed this appeal.

SUMMARY OF ARGUMENT

I. Ericsson had no right to a jury trial. Once TCL's damages claim was dismissed, no legal claims for relief remained. The claims tried were TCL's claim for breach of contract, and the parties' claims for declaratory relief. The relief awarded consisted of specific performance of Ericsson's FRAND obligation, and imposition of the adjudicated license terms in the form of an injunction. This was all equitable, which Ericsson repeatedly confirmed. The release payment was not damages. No patent infringement claims or defenses were tried or decided, because they were stayed early in the case. Instead, the release payment was merely a term in Ericsson's proposed license, which the court adopted and imposed as part of the injunction. Ericsson cannot complain it was deprived of a jury trial when the court decided the case using Ericsson's proposed case management framework, which Ericsson agreed implicated the court's equitable powers.

II. The court's rate setting was based on its detailed evaluation of a huge amount of evidence. As a mostly factual inquiry, it must be reviewed for clear error. The court's analysis was overwhelmingly consistent with Ericsson's own historical positions, and well supported by the evidence, and thus a reasonable way to determine the royalty rates for TCL's license—the exact task requested by both parties.

Ericsson itself was a vocal proponent of the top-down method, including throughout this case. The reason Ericsson now criticizes that approach is because it knows its true proportional share of SEPs did not allow it to use a top-down analysis to support its demanded rates. Contrary to Ericsson, the court's analysis was not based on mere patent counting. Rather, the court considered the evidence regarding the quality of Ericsson's patents and determined they were no better than average. The result was a reasonable approximation of a fair and reasonable rate for a large and diverse patent portfolio, which is all the law requires.

The court's comparable license analysis was also consistent with Ericsson's prior advocacy. Ericsson favored percentage rates well into this litigation, only doing an about-face after it became clear it had licensed Samsung, LG, HTC, Apple, and Huawei—all major TCL competitors—at effective percentage rates far lower than what Ericsson was demanding TCL pay. Its breach having been exposed, Ericsson sought a new metric in the form of dollar-per-unit rates. But even those rates show wide variability across Ericsson's licensees. There was zero evidence of any fixed, intrinsic value of Ericsson's SEPs. Instead, the evidence revealed a licensor trying to ensure for itself more rather than less revenues for reasons that were self-interested rather than analytical. Ultimately, Ericsson was caught demanding royalty rates it could no longer justify, having given far better deals to numerous other companies. On this evidentiary record, the court's decision was correct and justified.

ARGUMENT

I. The Court Properly Concluded the Only Claims Left to Be Tried Were Equitable, and Thus There Was No Right to a Jury Trial.

A litigant has no unqualified right to a jury trial in federal court. Instead, a litigant is entitled to a jury only pursuant to statute, or if the claim is "analogous" to one that would have been filed in a court of law when the Seventh Amendment was adopted. *See In re Tech. Licensing Corp.*, 423 F.3d 1286, 1287 (Fed. Cir. 2005). Where there are "no legal claims in a suit," there is no right to a jury. *Owens-Illinois v. Lake Shore Land Co.*, 610 F.2d 1185, 1189 (3rd Cir. 1979).

In determining whether a claim is legal or equitable, a court must consider the issues in the context of the pending claims. *See id.* at 1190. Thus, courts apply the following two-part test:

> First, a court must compare the action with the analogous action brought in the courts of England during the eighteenth century, prior to the merger of law and equity. Second, a court must look to the remedy sought and determine whether it is legal or equitable in nature . . . [T]he nature of remedy sought [is] the most important factor for the court to consider . . .

In re Tech. Licensing, 423 F.3d at 1287-88, citing *In re Lockwood*, 50 F.3d 966 (Fed. Cir. 2009), *vacated as moot*, 515 U.S. 1182 (1995).

Applying these legal principles to the record, the claims tried were equitable, not legal, and thus no jury was required. A proper understanding of the record is fundamental to reaching this conclusion. TCL sets forth the relevant history below, because Ericsson did not.

A. Relevant Facts and Procedural History

1. *The parties' original claims for relief*

The California Action: TCL's Second Amended Complaint (the operative pleading) in the California Action asserted twelve claims for relief: (1) breach of contract, (2) promissory estoppel, (3) declaratory judgment, (4) fraudulent misrepresentation, (5) negligent misrepresentation, (6) violation of California's Unfair Competition Law, (7) declaratory judgment of non-infringement of U.S. Patent No. 6,301,556, (8) declaratory judgment of invalidity of U.S. Patent No. 6,301,556; (9) declaratory judgment of non-infringement of U.S. Patent No. 6,473,506, (10) declaratory judgment of invalidity of U.S. Patent No. 6,473,506; (11) infringement of U.S. Patent No. 7,778,340, and (12) infringement of U.S. Patent No. 7,359,718. Appx641. TCL sought damages for its contract, tort, and patent infringement claims, and also asked the court to:

> Determine the FRAND rates that TCL is entitled to . . .
>
> Enjoin Ericsson from further demanding excessive royalties from TCL . . .
>
> Decree that Ericsson has not offered [FRAND] royalties to TCL . . . [and]
>
> Decree that TCL is entitled to license from Ericsson any and all [SEPs] under [FRAND] terms and conditions . . . .

Appx683.

Ericsson counterclaimed for (1) breach of the obligation to negotiate in good faith, and (2) promissory estoppel, and asked for damages. Appx1402-04, ¶¶ 23 and 28. Similar to TCL, Ericsson also asked the court to:

> Determine the FRAND terms and conditions . . . [and]

> Order that TCL enter into a worldwide license with Ericsson . . . on the FRAND terms and conditions adjudicated by this Court . . .

Appx1405.

<u>The Texas Action</u>: Ericsson also filed a comparable action in Texas. Appx60806 (as amended). Ericsson claimed TCL infringed just two alleged SEPs, which were defined as "the Ericsson Patents," and sought damages based thereon. Appx60817-818; Appx60827. Ericsson further requested that the court declare "that [it] complied with its FRAND commitments . . . or, alternatively, adjudge and declare what steps would be required for Ericsson to achieve such compliance." Appx60824; Appx60828. TCL counterclaimed with the same claims it was pursuing in the California Action. Appx60942-84.

<u>Jurisdiction and Consolidation</u>: Early on, Ericsson alleged there was no federal subject matter jurisdiction in the California Action. Appx588-90. The court disagreed because TCL's declaratory judgment claim in its original complaint anticipated a hypothetical coercive claim for patent infringement by Ericsson, which was based on federal law. Appx741-43. This issue became moot when the Texas Action was later transferred and consolidated with the California Action. Appx6653-54. The Texas Action contained the same claims TCL had asserted in the California Action, and it was undisputed the Texas Action gave rise to federal subject matter jurisdiction from its inception because Ericsson had sued

TCL for patent infringement.

2. *Over the course of the litigation, the pleadings were substantially narrowed.*

During the first two years of the litigation, many of the parties' claims were either dismissed or stayed. In May 2015, the parties agreed to stay all claims related to Ericsson's patents. Appx5146-47; Appx6653-54. In June 2015, the parties agreed to dismiss without prejudice all claims related to TCL's patents. Appx6664-66, Appx6674-6. In June 2016, the parties agreed to dismiss Ericsson's counterclaims in the California Action, thereby also eliminating the corresponding damages claim. Appx28203-4. Lastly, TCL's claims for fraudulent misrepresentation, negligent misrepresentation, and unfair competition were also dismissed. *Id.*; Appx38789. As a result of these events, the only active damages claim left in the case was TCL's claim for damages based on Ericsson's breach of contract.

3. *During the time TCL's legal claim for damages remained, the parties discussed the role of a jury.*

The parties recognized that so long as TCL was seeking damages based on Ericsson's breach of its FRAND obligations (*e.g.*, attorney's fees and costs defending Ericsson's foreign litigation), there would need to be a jury trial as TCL's claim for damages was a legal claim for relief. *See, e.g.*, Appx1891-93; *Dairy Queen, Inc. v. Wood*, 369 U.S. 469, 479 (1962). As a result, they discussed a trial plan that would address what the jury vs. court would decide, and in what order, with TCL making various proposals. *See, e.g.*, Appx2453-59, Appx2559-76. These discussions only occurred in the context of TCL having a damages claim based on Ericsson's breach of FRAND.[1]

4. *Ericsson's case management proposals and the "FRAND contentions" set the stage for how the case was tried.*

Ericsson argued it wanted a global resolution with TCL, whereby "we have a license that is binding between the parties, that both sides will commit to and we would just plug in the adjudicated FRAND term or terms . . . ." Appx131782. Towards that end, Ericsson proposed "the parties engage in a bid sheet process and structure the litigation in that fashion." Appx131815. Ericsson argued there would be two steps. First, a jury would determine whether Ericsson's proposal was FRAND. Appx1892-3. This first step would be for the jury because it was intermixed with TCL's damages claim under *Dairy Queen*. *Id*. If the jury agreed with Ericsson, that proposal would be imposed on TCL. Appx1892-3. If the jury disagreed, then the court would reform the terms to make them FRAND. *Id*. Ericsson argued this second step was *equitable*, and *thus for the court*. Appx1892,

[1] TCL notes Ericsson's misleading reference to the motion Ericsson filed regarding what issues a jury would decide, and the court's order. AB, p. 35. That motion was filed when all acknowledged there would be a jury trial given TCL's claim for damages based on Ericsson's breach of FRAND. Contrary to Ericsson's argument, the court did not later do an "about-face"—rather, circumstances materially changed when TCL's damages claim was dismissed.

lines 22-27; Appx2567-70; Appx131867-68.

The court ultimately adopted a similar approach. It ordered the parties to provide contentions defining the contents of a FRAND license. Appx131713, lines 2-6. Ericsson's "FRAND contentions" consisted of two license proposals: Option A, which used a lump-sum payment and running royalties, and Option B, which used only running royalties. Appx2718-78; Appx4795-857. The court later ruled the FRAND determination would be made by reference to Ericsson's Option A and B offers. Appx38768-70. If either offer was FRAND, it would be imposed on TCL. Appx38769. If neither offer was FRAND, the court would then formulate new terms. Appx78770. Ericsson agreed the imposition of the adjudicated terms would be injunctive. Appx2569, lines 12-15; Appx3190, lines 23-27; Appx131743; Appx131897-8.

5. *The release payment was part of the license.*

There was no prayer for a release payment in the complaints filed by Ericsson in the California and Texas Actions. Appx1405; Appx60827-28. Instead, the release payment was introduced via the terms of Ericsson's Option A and B proposals. One term Ericsson argued "the license should include" was "a release payment covering past unlicensed sales by TCL." Appx3191, lines 4-5. Thus, both Option A and B included, as "consideration [for] the license granted herein," a "release payment for past unlicensed sales," which was to be calculated using the forward-looking rates in the two proposals. Appx2748, § 7.1(a), and Appx2768, § 6.1(a). Ericsson said the amount of any release payment "will be determined by the Court at the conclusion of this litigation."[2] Appx38867, lines 12-14.

Ultimately, TCL stipulated the case would include a determination as to the release payment. Appx131911, lines 20-22. TCL merely agreed the release payment, if appropriate, would be a component of the license being adjudicated. TCL never stipulated to bypass any of the procedures or defenses inherent in a plaintiff actually obtaining damages based on a patent infringement claim, such as infringement contentions, claim construction, invalidity contentions or determinations, etc. With the claims and defenses related to patent infringement having been stayed, none of the above things occurred during the case.

6. *The court dismissed TCL's damages claim, leaving only equitable claims for relief.*

In August 2016, the court granted Ericsson's motion for partial summary judgment of no damages, thereby eliminating the last legal claim for relief in the case. Appx38805-16. However, the court denied Ericsson's motion for partial summary judgment of no liability. Appx38798-805. At the hearing, the court

[2] TCL notes that during a hearing in April 2015, its counsel stated that "Ericsson has a prayer for relief in the form of a release payment in the pleadings." Appx131751, lines 13-14. TCL's counsel was referring to Ericsson's inclusion of a release payment in the FRAND contentions (*i.e.*, the Option A and B offers), which had just been filed and had taken on the status of a quasi-pleading given the role they could play in the court's decision.

inquired what its rulings meant with respect to TCL's breach of contract claim. Appx131927-8. Ericsson conceded TCL could still seek equitable remedies like "specific performance" and "injunctive relief." Appx131929. Ericsson also confirmed that "a determination of the FRAND rate" would be "a function for the Court." Appx131930.

The parties then briefed whether a jury would be required. Appx38818; Appx38836. Ericsson agreed the only remaining claims for relief were (1) TCL's claim for breach of contract, "insofar as TCL seeks the remedy of specific performance of its claim for adjudication of Ericsson's Option A and B offers," and (2) the parties' competing claims for declaratory judgment. Appx38826-27. The court ruled no jury was required because the remaining relief sought was equitable. Appx131997-98; Appx132007. The parties thereafter submitted the Final Pretrial Conference Order, which further makes clear the only remaining claims for relief were equitable, in that the parties sought determination and imposition of the FRAND terms and conditions. Appx46359, 62-70.

7. *The court decided the case consistent with the above plan.*

In deciding the case, the court explained that "the only claims tried were the parties' respective claims for breach of contract and declaratory relief regarding Ericsson's compliance with its FRAND obligation and declaratory relief for determination of FRAND rates. The parties' respective claims regarding infringement, invalidity, and other substantive patent defenses were previously stayed." Appx29, n.3. Thus, the court endeavored to determine if Ericsson's Option A and B offers were FRAND, and if they were not, it committed to "determine" and "supply" the FRAND terms. Appx28-29.

After concluding Ericsson's Option A and B offers were not FRAND, the court then set the new terms for the parties' license. Appx139-141. The release payment was calculated using the same rates used for the going-forward license, which was consistent with the terms of Option A and B. Appx130-133.

The parties then briefed the form of the judgment. Appx55730; Appx55889; Appx55896; Appx132012-22. Ericsson tried to insert language stating the release payment constituted a "monetary judgment" based on TCL's infringement of the two Ericsson Patents, even though the court did not make any such findings. Appx55746; Appx55890; Appx132018. The court rejected this, instead requiring that the release payment be paid consistent with the terms of Ericsson's license. Appx56035-36. The court also dismissed without prejudice the parties' claims regarding the two Ericsson Patents, given that the injunctive relief mooted any dispute over infringement and invalidity. Appx56044.

After the judgment was finalized, TCL noticed there was language in the "Payment" section which still referenced the two Ericsson Patents. Appx56038 at 14-16. Contrary to Ericsson's brief, the court was not the source of this language.

AB, pp. 35-36. Instead, the language had been added by Ericsson during the drafting stage, but had not been marked in redline form and thus was missed. Appx56172-73; Appx56221. Because the language was inconsistent with how the court had finalized the judgment, TCL sought to amend the judgment to remove this language. Appx56166. The court agreed, given that it never decided any infringement claims. Appx56432-33.

B. As a Matter of Law, the Relief Awarded by the Court Was Equitable.

1. *The relief awarded by the court was in the nature of specific performance and injunctive relief.*

As the facts and procedural history show, by the time of trial no legal claim for damages remained. Glaringly absent from Ericsson's brief is any meaningful acknowledgment of the role that specific performance and injunctive relief played in the parties' claims for relief, and the equitable nature of that relief.

There is no dispute the remedy of specific performance is equitable in nature, and this has been so since before the merger of law and equity. *See Express Co. v. Railroad Company*, 99 U.S. 191, 198 (1878) ("A court of equity [could] grant the relief prayed for not only by injunction, but by a decree for specific performance.") (citations omitted). As a leading federal treatise explains, "[a]n action for specific performance of a contract historically is equitable in nature." Charles Alan Wright & Arthur Miller, 9 FED. PRAC. & PROC. CIV. § 2309

(3d ed. Apr. 2016 Update); *see also AstenJohnson, Inc. v. Columbia Cas. Co.*, 562 F.3d 213, 224 (3rd Cir. 2009) ("An action for specific performance without a claim for damages is purely equitable and historically has always been tried to the court."), citing *Klein v. Shell Oil Co.*, 386 F.2d 659 (8th Cir. 1967); *U.S. v. Georgia-Pacific Co.*, 421 F.2d 92, 104 (9th Cir. 1970) (agreeing that "[t]he enforcement of a contract by a decree for its specific performance rests in the sound discretion of the court—a judicial discretion to be exercised in accordance with established principles of equity").

It is likewise undisputed that injunctive relief is an equitable remedy, and this has also been the case since before the merger of law and equity. *See Express Co.*, 99 U.S. at 198; *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 311 (1982) ("It goes without saying[,] that an injunction is an equitable remedy."); *Amoco Prod. Co. v. Vill. of Gambell*, 480 U.S. 531, 542 (1987) ("acknowledging [] the fundamental principle that an injunction is an equitable remedy that does not issue as of course"); *see also Porter v. Warner Holdings Co.*, 328 U.S. 395, 398 (1946) (explaining that "[u]nless otherwise provided by statute, all the inherent equitable powers of the District Court are available for complete exercise of [its] jurisdiction" to enjoin unlawful practices).

As addressed in the prior section, the only claims for relief that were tried were TCL's claim for breach of contract, and the parties' claims for declaratory relief. Because TCL no longer had any damages claim, the evaluation of whether Ericsson's offers were FRAND did not implicate any legal claims for relief. All agreed TCL was left with the equitable remedy of specific performance. *See supra* at p. 17. Such specific performance would consist of a ruling as to whether Ericsson's Option A and B were FRAND, followed by a setting of the FRAND terms and conditions in order to complete the parties' license. That is what TCL asked for, Appx683, Appx46368, and what the court did. Appx139-41. Ericsson agreed this was all equitable, and thus for the court. *See supra* at pp. 14, 17. Likewise, it was undisputed the proceedings would result in a judgment reflecting the governing terms, and that is precisely what the court did. *See supra* at pp. 15, 17. All agreed this outcome would be injunctive in nature, and hence for the court. *See supra* at pp. 15, 17. In sum, once TCL's claim for damages was dismissed, Ericsson had no right to a jury trial.

2. *Ericsson's analysis of the parties' declaratory judgment claims misses the mark in numerous respects.*

Instead of acknowledging the role that specific performance and injunctive relief played in the court's decision, Ericsson instead confuses the impact TCL's claim for declaratory relief has on the Seventh Amendment analysis. Ericsson does so by conflating the test for when a claim under the Declaratory Judgment Act arises under federal law for purposes of subject-matter jurisdiction (the court is to consider the nature of the "hypothetical complaint" the defendant would have filed, and whether that claim arises under federal law) with the test for when a jury is required under the Seventh Amendment (the court is to consider what options were available to the plaintiff at common law, and whether those options implicated law or equity). Ericsson incorrectly cites *ABB Inc. v. Cooper Indus., LLC*, 635 F.3d 1345, 1349-50 (Fed. Cir. 2011), as supposedly addressing the latter, when instead it *only* concerned the former. AB, pp. 29-30.

The relevant test governing whether a claim under the Declaratory Judgment Act triggers the right to a jury trial requires a court to assess "in what kind of suit the claim would have come to court if there were no declaratory judgment remedy." *Owens-Illinois*, 610 F.2d at 1189. "If the declaratory judgment action does not fit into one of the existing equitable patterns but is essentially an inverted law suit—an action brought by one who would have been a defendant at common law—then the parties have a right to a jury." *Id.*, citations omitted; *see also James v. Pennsylvania General Ins. Co.*, 349 F.2d 228, 230 (D.C. Cir. 1965) (same).

Here, TCL's claims *did* "fit into one of the existing equitable patterns" pre-merger. *Owens-Illinois*, 610 F.2d at 1189. In particular, a court of equity could have addressed Ericsson's breach of contract by imposing FRAND terms and conditions on the parties via the remedies of specific performance and injunctive relief. *See Express Co.*, 99 U.S. at 198 ("A court of equity [could] grant [relief for breach of contract] not only by injunction, but by a decree for specific performance."). Indeed, the law could not have provided TCL with an adequate remedy for Ericsson's ongoing failure to provide TCL with FRAND terms and conditions; a court of equity would have been needed to order compliance by Ericsson. *See id.* ("The just conclusion . . . would seem to be that courts of equity ought not to decline the jurisdiction for a specific performance of contracts whenever the remedy at law is doubtful in its nature, extent, operation, or adequacy."), citations omitted.

Ericsson ignores this, instead misleadingly focusing on the court's early ruling that TCL's claim for a declaratory judgment arose under federal law because it was in anticipation of a hypothetical coercive claim for patent infringement. But this ruling is inapposite, as it is not dispositive of the nature of the claims ultimately pursued, or the relief afforded, for purposes of the Seventh Amendment. The fact TCL's declaratory judgment claim anticipated an infringement action by Ericsson is *neutral* with respect to whether the claim was premised on legal or equitable relief, given that a patentee alleging infringement can seek either damages (legal relief) or an injunction (equitable relief). *See* 35 U.S.C. §§ 283, 284; *Wise v. Grand Ave. Ry. Co.*, 33 F.3d 277, 278 (C.C.W.D.Mo. 1888), cited in *In re Lockwood*, 50 F.3d at 976.

Ericsson's claim for damages based on patent infringement was *stayed*. Instead, Ericsson agreed to have the court evaluate whether its proposals were

FRAND, and then impose modified terms via an injunction if not. That process implicated the court's equitable powers, which Ericsson conceded. *See supra* at pp. 15-17; *see also Paice LLC v. Toyota Motor Corp.*, 504 F.3d 1293, 1314-16 (Fed. Cir. 2007) (explaining that compulsion of a license, and the setting of a forward-looking royalty, constitute a form of mandatory injunctive relief subject to the court's discretion). This case is therefore more similar to *In re Tech. Licensing*, wherein the patentee withdrew its claim for damages and pursued only equitable remedies. *See* 423 F.3d at 1287.[3] This conclusion is also consistent with *In re Lockwood,* wherein this Court explained that "courts of equity gave a patentee the option of pursuing injunctions and accounting against alleged infringers. The choice of forum and remedy, and thus of the method of trial, was left with the patentee." 50 F.3d at 976, citations omitted. What Ericsson did is consistent with what it would have done before a court of equity pre-merger: it sought to impose adjudicated contractual terms on TCL, coupled with an accounting with respect to any sums due pursuant to those contractual terms.

3. *The release payment was merely a component of the injunction.*

The inclusion of the release payment in the injunction does not change the

[3] Contrary to Ericsson, *In re Tech. Licensing* does not stand for the proposition that all "declaratory-judgment actions that anticipate infringement actions" must be tried to a jury. AB at p. 27. Instead, it says that a declaratory judgment action that anticipates an infringement action where the patentee only seeks equitable relief does *not* necessitate a jury trial.

analysis, because "[t]he fact that a judicial remedy may require one party to pay money to another is not a sufficient reason to characterize the relief as 'money damages.'" *Bowen v. Massachusetts*, 487 U.S. 879, 893 (1988), citations omitted; *see also Paice LLC*, 504 F.3d at 1316 ("not all monetary relief is properly characterized as 'damages'"). "Damages are given to the plaintiff to substitute for a suffered loss, whereas specific remedies 'are not substitute remedies at all, but attempt to give the plaintiff the very thing to which he was entitled.'" *Bowen*, 487 U.S. at 895, citations omitted.

The only reason the release payment was adjudicated is because it was a term in Ericsson's Option A and B license proposals. *See supra* at pp. 15, 16. There was no prayer for a release payment in Ericsson's complaints, and Ericsson's infringement claims were stayed. *Id*. The release payment cannot *actually* constitute damages in the context of how the proceedings *actually* unfolded, because the court did not make any finding regarding infringement of the two Ericsson Patents, nor did it resolve TCL's invalidity defenses. Ericsson admitted this. Appx36678 (Ericsson arguing that "[a] jury does not determine damages for patent infringement unless it has already determined that the plaintiff has proven its claim for infringement of a valid and enforceable patent by a preponderance of the evidence"). Instead of pursuing litigation of the infringement and invalidity claims, Ericsson elected to have the court impose a license which included, as a term, an accounting of TCL's worldwide past sales at the forward-looking rates otherwise set by the court. Appx131749-51 (Ericsson describing the release payment as a "term" from the "parties' negotiations" that would need to be included as part of the "contractual or injunctive relationship" in order to "resolve[] the [parties'] dispute," as opposed to "sending the whole matter" in a different "direction"); Appx46366, lines 9-11; Appx38867, lines 12-14; *see also In re Lockwood*, 50 F.3d at 976 (explaining that "courts of equity gave a patentee the option of pursuing injunctions and accounting against alleged infringers").

Ericsson's reliance on *Great-West Life & Annuity Ins. Co. v. Knudson*, 534 U.S. 204 (2002), is misplaced. *Great-West Life* is factually inapposite because the plaintiff there was seeking "to impose personal liability on respondents for a [pre-existing] contractual obligation to pay money . . . ." *Id.* at 210. Here, in contrast, the parties' FRAND dispute was not based on enforcement of a payment term in a pre-existing contractual relationship between Ericsson and TCL, but rather was about creating a *new* contractual relationship (a license). *Compare Klein*, 386 F.2d at 662-64 (holding that court's completion of an executory contract between parties was equitable, even if one side was then required to pay money to the other).

Great-West Life's discussion of when restitution is equitable helps demonstrate why the release payment was equitable. The Court explained that an order which effectively "restore[s] to the plaintiff particular funds or property in the defendant's possession" is equitable. 534 U.S. at 214. Here, the only reason TCL was not already paying 3G and 4G royalties to Ericsson is that Ericsson had not offered FRAND terms and conditions. The court's injunction remedied that situation and resolved the parties' dispute. The release payment was a way to retroactively restore to Ericsson that which it would have already received if the FRAND terms and conditions had previously been set, and a license not delayed. Thus, the release payment was an "attempt to give [Ericsson] the very thing to which [it] was entitled" under the new license, and hence a form of equitable relief, as opposed to a "substitute for a suffered loss," which would have constituted legal relief. *Bowen*, 487 U.S. at 895. In effect, the monies which comprised the release payment had been held by TCL in "constructive trust" in anticipation of the court's equitable relief. *Great-West Life*, 534 U.S. at 214. Ericsson pursued this argument at trial, emphasizing TCL had been "provisioning" for anticipated licensing royalties to Ericsson. Appx51460-62 at ¶¶ 336-342.

Because the release payment was a term of the injunction which completed the parties' new license, and no patent claims or defenses were tried, the release payment does not constitute damages and instead was an aspect of the court's equitable relief. Ericsson cannot say it was deprived of a jury trial when no legal claims for relief were decided, and the court resolved the parties' dispute using the same framework proposed by Ericsson, which it repeatedly agreed was an exercise of the court's equitable powers.

II. The Court's Rate Setting Was Consistent with the Evidentiary Record and FRAND Royalty Principles.

A. The Court's Determination of the FRAND Royalty Rates Is Reviewed for Clear Error.

This Court "reviews a district court's judgment following a bench trial for errors of law and clearly erroneous findings of fact." *Commonwealth Sci. & Indus. Research Organisation v. Cisco Sys., Inc.*, 809 F.3d 1295, 1300 (Fed. Cir. 2015), *citing Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1343–44 (Fed. Cir. 2002). "A finding of fact is 'clearly erroneous' when although there is evidence to support it, the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed." *United States v. United States Gypsum Co.*, 333 U.S. 364, 395 (1948).

The court's determination of a FRAND royalty rate is a finding of fact reviewed under the clear error standard. *SmithKline Diagnostics, Inc. v. Helena Labs. Corp.*, 926 F.2d 1161, 1164 (Fed. Cir. 1991). Certain subsidiary decisions, such as the methodology for arriving at a reasonable royalty, are reviewed for abuse of discretion. *See id.*

Ericsson argues mixed questions of law and fact are reviewed *de novo*. AB, p. 40. That is not correct. "[T]he standard of review for a mixed question all depends on whether answering it entails primarily legal or factual work." *U.S.*

Bank Nat. Ass'n ex rel. CWCapital Asset Mgmt. LLC v. Vill. at Lakeridge, LLC, 138 S. Ct. 960, 967 (2018). When mixed questions immerse courts in case-specific factual issues—compelling them to marshal and weigh evidence, make credibility judgments, and otherwise address facts that resist generalization—appellate courts should review them with deference. *See id.*

Here, the court's FRAND analysis consisted primarily of factual work, with the court evaluating a massive amount of evidence. Like the issues in *U.S. Bank*, Ericsson's appeal centers on an issue where the court reviewed "a raft of case-specific historical facts, consider[ed] them as a whole, [and] balance[d] them one against another . . . ." *U.S. Bank*, 138 S. Ct. at 968. "Just to describe that inquiry is to indicate where it (primarily) belongs: in the court that has presided over the presentation of evidence, that has heard all the witnesses, and that has both the closest and the deepest understanding of the record." *Id.*

B. The Court's Top-Down Analysis Was Supported by the Record and FRAND Principles.

Although Ericsson avoids explicitly denouncing a top-down analysis in its brief, its criticisms of what the court did all operate to that effect. Ericsson's criticisms are disingenuous, and they all fail. The court's approach was consistent with Ericsson's own advocacy, and was based on a thorough, reasonable weighing of the evidence.[4]

1. *Ericsson long advocated a top-down approach to setting FRAND royalties.*

Ericsson refers to the top-down framework as "an unreliable methodology of [the court's] own creation." AB, p. 44. But the top-down approach was not invented by the court; *it came from Ericsson*:

- Prior to 3G and 4G, Ericsson agreed to license its SEPs using the top-down method, *i.e.*, "reasonable, maximum aggregate royalty rates based on the value added by the technology in the end product" and "the licensors' proportional share of all standard essential IPR . . . ." Appx75486; Appx65705.
- Ericsson advocated for the use of the top-down method on its website, calling it "the prevalent industry interpretation of FRAND." Appx76093; Appx65705; Appx53690-91.
- Ericsson calculated the royalty rates reflected in its internal "reference prices" using the top-down method. Appx53711-12, 716-18; Appx63558-60.

[4] The court's decision does not stand for the proposition that FRAND rates *always* must be calculated using a top-down analysis. AB, p. 44. Instead, the court weighed the evidence and reasonably decided to use a top-down method as one component in determining FRAND royalty rates for the large portfolio at issue. Appx44.

- Ericsson promoted the top-down method when it arbitrated a FRAND dispute with Huawei in 2015. Appx75923-24.
- Ericsson also endorsed the top-down method in its discovery responses and deposition testimony in this case. Appx63826-27; Appx63835; Appx57929-31; Appx53704-06.

The real reason Ericsson now attacks the top-down method is because the evidence did not allow Ericsson to fulfill a top-down analysis while still supporting its royalty demands. Ericsson formerly justified its 4G royalty rates by claiming it had, or would have, a 25% share of all 4G SEPs. Appx53711-12, 16-18; Appx76093. When combined with a 10% aggregate royalty, that produced a 2.5% rate; when combined with a 6% aggregate royalty, that produced a 1.5% rate. Appx53711-12; Appx57930-31. Yet no Ericsson witness testified at trial regarding Ericsson's proportional share of 2G, 3G, or 4G SEPs. Appx53717-18. The reason is because Ericsson could not support its prior statements about its proportional share. Ultimately, the court found Ericsson's share of 4G SEPs was between 4.7% and 7.5%. Appx73. Because Ericsson could not carry out a favorable top-down analysis, it has resorted to attacking the very method which it long promoted.

2. *The top-down method is consistent with Federal Circuit precedent.*

The court's use of the top-down method was consistent with the law. "This court has recognized that estimating a reasonable royalty is not an exact science," and "there may be more than one reliable method for estimating a reasonable royalty." *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1296 (Fed. Cir. 2015); *Cisco Sys., Inc.*, 809 F.3d at 1301–02. This is particularly true in the context of valuing SEPs, where this Court disfavors "bright line rules," cautioning that "courts must consider the facts of record" and "should avoid rote reference to any particular damages formula." *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F. 3d 1201, 1231–32 (Fed. Cir. 2014).

Many courts have used top-down approaches in assessing FRAND royalties. In *Microsoft v. Motorola*, the court used a patent pool rate to establish "the highest value in the record considered by industry companies during efforts to reach a royalty rate which the court has found to be an indicator of RAND," and then determined the upper limit for the rate by "[a]pplying the pro rata share of Motorola's H.26 SEP portfolio." *Microsoft v. Motorola*, No. C10-1823JLR, 2013 WL 2111217, *86-87 (W.D.Wash. Apr. 25, 2013). Similarly, in *Innovatio* the court adopted a top-down approach after determining it "best approximates the RAND rate that the parties to a hypothetical ex ante negotiation most likely would have agreed upon . . . ." *Innovatio IP Ventures, LLC Patent Litigation*, No. 1:11-cv-9308, 2013 WL 5593609, *37–8 (N.D.Ill., Oct. 3, 2013).

The top-down method is also consistent with this Court's reasonable royalty precedent because an assessment of the incremental value of the SEPs is baked into the analysis. Ericsson's public statements regarding the maximum reasonable aggregate royalty burden were made prior to the adoption of the standards, and thus embody a reasonable measure of the incremental *ex ante* value of Ericsson's SEPs. Appx75486; Appx76093; Appx65705; Appx43849, 74-78; Appx57930-31; Appx45. Indeed, when Ericsson committed to "a single-digit percentage of the sales price" as "a reasonable maximum aggregate royalty level" for 4G, it explained that this figure was "*based on the value added by the technology in the end product.*" Appx75486 (emphasis added); Appx63835.

3. *The court did not engage in simple patent counting*.

Ericsson's argument that the court engaged in "simple patent counting" is incomplete, misleading, and disingenuous. AB, pp. 40-44. The court did not simply resort to counting patents, or use a "rule of thumb," without any regard for the contribution of Ericsson's SEPs. Rather, the court's approach *followed*, and was *a result of*, its consideration of the relative quality of Ericsson's patents.

TCL presented evidence that Ericsson's SEPs had little technical value, and also that its 4G SEPs were below average. Appx57556-58; Appx56948–54; Appx56966–81. TCL's experts performed a detailed analysis of the relative importance and contribution of Ericsson's SEPs. Appx57356-67; Appx57390-466. They "did not find any fundamental patents that radically changed the technological landscape in Ericsson's 2G, 3G, and/or 4G SEP portfolios."

Appx57329. Instead, "the vast majority . . . provided little to no intrinsic technical value to the standards." Appx57330; Appx57557; Appx56952–54; Appx56970–81; Appx57058-59. Ericsson, on the other hand, did not present *any* evidence that its SEPs were better than average.

Although the court did not accept all of TCL's analysis regarding the relative importance and contribution of Ericsson's SEPs, it still found "some value in the technical analysis, particularly to show that Ericsson's patent portfolio is certainly not as strong or essential as it has claimed." Appx69. In contrast, Ericsson only attempted to value a small fraction of its SEPs (via its so-called "ex standard" analysis), which the court correctly found "lacked fundamental credibility." Appx75-79. On this record, it was not unreasonable for the court to assign Ericsson's SEPs average value, and thereafter "count" those patents, especially given the complexity of the undertaking—setting FRAND rates for a huge portfolio across multiple standard-compliant devices.[5]

[5] Ericsson's position is also quite disingenuous. Ericsson consistently advocated for the top-down approach because it said it had a large share of the total pool of SEPs. Appx53711-12, 16-18; Appx63558-59; Appx76093. And Ericsson sought to demonstrate the size of its share by using a pure form of "counting"—specifically, counting the number of approved technical contributions made to ETSI and 3GPP. Appx43694-99; Appx53710-16; Appx63558-59. But this was even worse than "patent counting," because approved technical contributions do not necessarily correspond to patents, nor did Ericsson make any effort to distinguish between important and ministerial contributions. Appx43699-709.

4. *Ericsson's argument regarding the role played by royalty stacking and hold-up has no merit.*

Ericsson's argument regarding "royalty stacking" and "hold-up" is a strawman. The court did not announce any principles of law, or instruct a jury as in *D-Link Sys.* Instead, the court merely noted that concerns with these phenomena did, in fact, motivate and inform Ericsson's prior pledges with respect to the use of a top-down method in general, and a maximum reasonable aggregate royalty in particular, in the course of explaining why it was reasonable to hold Ericsson to these statements and use a top-down method. Appx51; *see also* Appx46-52.

The court's statements were correct. For example, after studies conducted before adoption of the LTE standard projected aggregate royalty rates "between 29 and 37 percent of the retail price of a handset," Appx57238, Ericsson weighed in by arguing these aggregate royalty rates were "clearly unreasonable and therefore not in line with FRAND commitments given," and that "it is important to secure reasonable maximum aggregate royalty rates in LTE." Appx76638. Ericsson said it was "willing to go public with a message that supports" this goal, which it then did by issuing public statements regarding the maximum reasonable aggregate royalty rate for LTE. *Id.* Ericsson said its goal was to "[f]oster an IPR environment in which a robust ecosystem can develop for widespread implementation, adoption and use of LTE to the benefit of consumers and to operators." Appx76631; *see also* Appx57929–31. The court acted well within its discretion in holding Ericsson to its public statements, especially when Ericsson continued to confirm through trial that it supported use of a single-digit maximum aggregate royalty for 4G.[6] Appx48-52; Appx57931; Appx63827; Appx53704-06.

Ericsson's further argument that it should be entitled to a 1.5% royalty for 4G because that is what it said it would charge is circular, self-serving, and turns the record on its head. AB, pp. 45-46. Ericsson's 1.5% royalty rate was based on the false notion that it had or would have a 25% share of all LTE SEPs. Appx76093; Appx53711-12, 16-18. But the evidence was to the contrary. At trial, under oath, Ericsson presented no contention regarding its share of LTE SEPs, and the court concluded Ericsson's actual share was between 4.7% and 7.5%. Appx53717-18; Appx73. Ericsson wants to keep its preferred royalty rate while throwing out the framework that produced it, even though the evidence makes clear that this framework—if populated by correct inputs—produces a far lower rate. It cannot be error for the court to have held Ericsson to its historical framework while merely correcting for the actual size and nature of Ericsson's patent portfolio in the analysis.[7]

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[6] Ericsson's attempt to avoid its prior public statements falls particularly flat when one considers Ericsson has repeatedly sought to hold other SEP owners—namely, Qualcomm and Huawei—to their public statements regarding the calculation of FRAND royalties. Appx53706–09; Appx62876–80; Appx75917.

[7] TCL also notes that this record absolutely *does* show hold-up. Ericsson sold the market on a framework for determining royalties, and then used a false input to justify far higher royalties for itself than a proper application of that framework

5. *The calculation of Ericsson's proportional share was sound and supported by the evidence.*

Ericsson's attacks on how the court calculated its proportional share are without merit or misleading in numerous respects, and also conspicuously ignore the relevant law, including with respect to the standard of review. This Court has recognized that "[d]etermining a reasonable royalty does not require 'mathematical exactness,' but *a 'reasonable approximation' under the circumstances of a given case*." *Gaylord v. United States*, 777 F.3d 1363, 1368 (Fed. Cir. 2015) (emphasis added), citing *Dowagiac Mfg. Co. v. Minnesota Moline Plow Co.*, 235 U.S. 641, 647 (1915); *Carnegie Mellon Univ. v. Marvell Tech. Grp., Ltd.*, 807 F.3d 1283, 1304 (Fed. Cir. 2015). Further, a district court's factual findings—such as the court's determinations regarding the numerator and denominator here—are reviewed for clear error and may only be disturbed if the "reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed." *United States Gypsum Co.*, 333 U.S. at 395. The law does not permit the Court to reverse a district court's findings of fact merely because it may have weighed the evidence differently. *See Anderson v. City of Bessemer City*, 470 U.S.

(using an accurate proportional share) would support. *See Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1046 (9th Cir. 2015) (defining hold-up as the act of pressuring the licensee to accept a higher rate than was "objectively merited"). Ericsson then pursued a strategy of suing potential licensees to "reach a license agreement." Appx62735.

564, 573–74 (1985).

a. The total number of SEPs (the denominator)

Ericsson's criticisms as to how the court determined the denominator are particularly disingenuous given that Ericsson presented *no evidence or contention* regarding what the denominator should have been, despite historically advocating for the top-down method, which necessarily requires identifying a denominator for purposes of calculating the patentee's proportional share of the SEPs. The only evidence put forward by either party was the analysis conducted by TCL's experts, which provides a *reasonable approximation* of the total number of SEPs for each standard. *See Gaylord*, 777 F.3d at 1368.

In particular, the engineers at Concur, overseen by Dr. Zhi Ding, conducted a survey that started with all 153,000 patents and/or applications declared as essential to the 2G, 3G, and 4G standards, and then reduced that population so it only included families with granted patents directed to user equipment ("UE"). Appx57332; Appx56816–41. Concur randomly sampled 33% of these declared SEP families, and then conducted its analysis based on that population. Appx56819. Dr. Ding concluded the margin of error in Concur's results was just 9.5%. Appx56828–9.

Ericsson criticizes the work of the Concur engineers, but the court considered and rejected Ericsson's position. Appx56-58. The Concur engineers were qualified to do the work at hand, with degrees in relevant fields such as communications technology, experience working with telecommunications companies, and expertise in mapping patents to products and the cellular standards. Appx56817; Appx45193; Appx81655-66. Ericsson's criticism as to the amount of time they spent per patent is highly misleading because Concur was already familiar with the patents, having previously conducted comprehensive studies relied on in business decisions, patent negotiations, and international arbitrations. Appx45193; Appx52867. Moreover, 20 minutes was merely the *average* amount of time spent per patent—straightforward essentiality determinations would take less time and more difficult determinations would have taken longer. *Id.* Dr. Ding also spent hundreds of hours confirming Concur's work.[8] Appx56816-17; Appx45194; Appx48672-5.

Ericsson also argues the pace of Concur's review "results in systemic overinclusion," but Ericsson cites no evidence in support. AB, p. 47. Instead, Ericsson points to the fact a court in the U.K. evaluated a separate study by Concur, and concluded the 4G denominator should be 800 (with little indication of

[8] Ericsson implies TCL should have spent 50 to 80 hours per patent because that is how long Ericsson took to prepare claim charts for its own patents, but that would mean TCL was required to spend over 130,000 hours determining the denominator. AB, p. 47. That equals ten people working eight hours per day, every day, for 4.5 years. Such an impossible effort is not required to generate a "reasonable approximation" of a FRAND royalty for a portfolio of hundreds of patents. *Gaylord*, 777 F.3d at 1368.

any precise method or math in arriving at that number). AB, pp. 47–48, discussing *Unwired Planet Int'l Ltd. v. Huawei Techs. Co.*, [2017] EWHC (Pat) 711, HP-2014-000005 [377]. It is ironic, to say the least, that Ericsson would have this Court disregard the painstaking factual analysis of the court in contravention of the clear error standard of review, by instead accepting a seemingly arbitrary finding of fact made by a court in a foreign country, based on a record that is not available.

Ericsson's argument that the Concur analysis resulted in an inflated denominator is not only unsupported, but it is actually belied by the record. Dr. Ding reviewed Concur's analysis for 442 patent families, changing 36 from non-essential to essential and only 6 from essential to non-essential. Appx56828-29. This suggests Concur's analysis *underestimated* the total number of SEPs, which would favor Ericsson by shrinking the denominator. In addition, the court favored Ericsson by examining the instances where Concur and Dr. Kakaes disagreed regarding the essentiality of a patent, and resolving every dispute in favor of non-essentiality in order to further reduce the denominator. Appx58. The above means, if anything, that the court's analysis *overestimated* Ericsson's proportional share of SEPs because the denominator was suppressed.

Ericsson's criticisms regarding margins of error are especially overblown when one considers the margin of error inherent in a license negotiation. Ericsson initially claimed to own 235 SEP families, but only provided claim charts for 192 of those families. Appx57, 59; Appx57356-57. At trial, Ericsson only argued 179 of its patent families were essential. Appx57. Thus, there was a 24% variance between Ericsson's initial contentions and its contentions at trial, and a 7% discrepancy between Ericsson's claim charts—which it contends are used in "real negotiations"—and Ericsson's contentions at trial. The rate at which Concur allegedly over-designated patents as essential is within the range of over-designation exhibited by Ericsson, and in any event was accounted for by the court in its final analysis.[9] Appx58.

b. <u>The number of Ericsson SEPs (the numerator)</u>

Ericsson's discussion of the numerator is equally misleading. First, the court did not impose any requirement that an Ericsson patent must be supported by a claim chart or else it would not be considered for inclusion in the numerator. AB, pp. 48-49. Instead, TCL demanded Ericsson take a position regarding the essentiality of its "declared" patents during discovery, and the resulting response—

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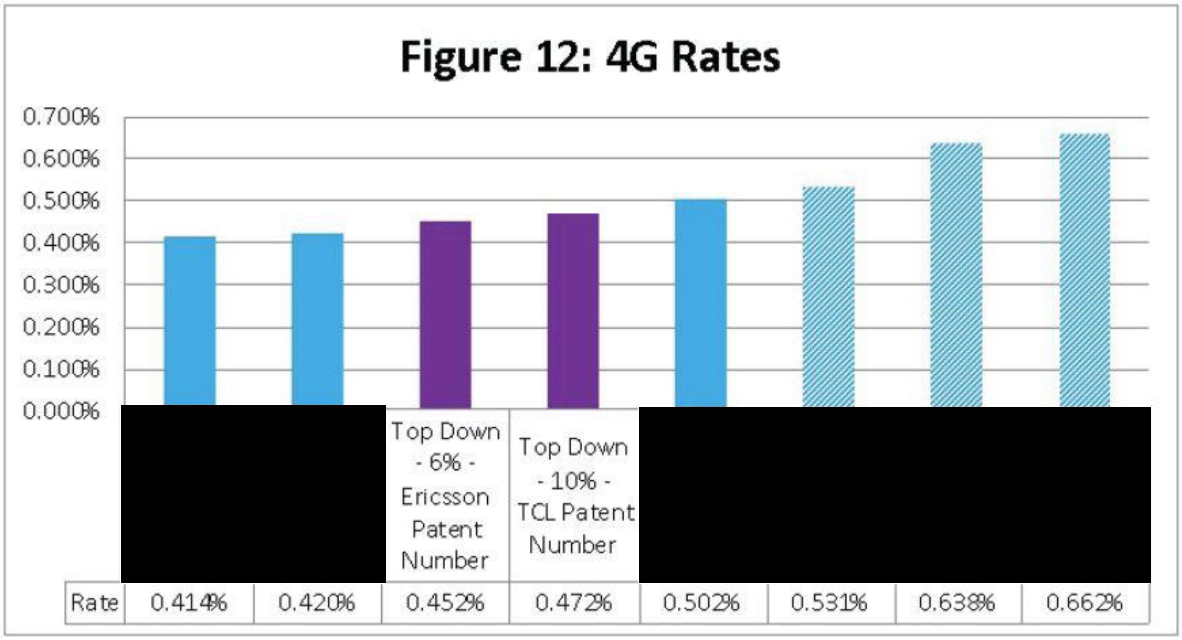
[9] Ericsson also points to the fact that one of TCL's experts, Dr. Lynde, did not use the results of the Concur analysis in unpacking the LG license because it resulted in a royalty rate flowing to LG. AB, p. 50. But it is not surprising that some of Ericsson's licenses would be inconsistent with royalties based on Ericsson's actual proportional share of SEPs. Ericsson represented it held a 25% share of 4G SEPs, Appx76093, while the top-down analysis showed Ericsson's share between 4.7% and 7.5%. Appx73. Thus, Ericsson's licenses were negotiated based on the false representation that Ericsson held three to five times more 4G SEPs than it actually did. That some licenses are inconsistent with a true accounting of Ericsson's SEPs is therefore to be expected.

which Ericsson chose to support with claim charts—was the starting point for both parties' assessment of which Ericsson patents were, in fact, essential. Appx2553-58; Appx57356-61; Appx80963-1140.

Second, Ericsson fails to clearly acknowledge that the court performed the top-down analysis using both TCL *and* Ericsson's numerator. Appx60; Appx72–73; Appx125. The court performed four separate top-down calculations, including two using Ericsson's contention that it owned 111 4G SEPs. Appx73. As explained by the court, performing a top-down calculation utilizing both parties' contentions "more accurately reflects the reality faced by parties in a licensing negotiation who each have different views about how many SEPs the licensor owns." Appx59.

Using the 6% aggregate royalty burden and *Ericsson's* contention regarding its number of 4G SEPs, the court calculated a FRAND rate of 0.452%—nearly identical to the 0.45% rate set ultimately for Ericsson's 4G SEP portfolio in the U.S. Appx73; Appx125. As seen in the court's Figure 12 (below), the court also considered the results of the comparable license analysis, which showed Ericsson's rates with [redacted], and [redacted] in the same vicinity . Appx125. Even if the court completely disregarded TCL's contentions regarding Ericsson's patents and only used Ericsson's contentions for the numerator, the combined results of the top-down and comparable license analyses would *still* easily support the court's

U.S. 4G rate of 0.45%:



A similar conclusion is reached with the 3G analysis. Calculating the 3G rate using *Ericsson's* own essentiality contentions results in only a very small increase. Appx73. Moreover, the U.S. rate produced using Ericsson's 3G contention (0.129%) is actually *lower* than the rates ultimately set by the court (0.30% for the U.S., 0.264% for Europe, and 0.224% for ROW). Appx127–28. That is because the court set the final 3G rates based not only on the top-down analysis, but also by reference to the effective 3G rates being paid by [redacted] and [redacted] pursuant to their licenses with Ericsson. Appx127.

C. The Court's Comparable License Analysis Was Also Supported by the Record and FRAND Principles.

Ericsson's pivot away from percentage running royalty rates is just as disingenuous as its disavowal the top-down method. Ericsson's historical licensing practices were *overwhelmingly* based on the use of percentage running royalty rates, and Ericsson remained firmly committed to that position throughout discovery. It was only after it became clear that Ericsson had licensed [redacted] and [redacted] at percentage rates far less than what it was demanding TCL pay that Ericsson did an about-face and started espousing the supposed virtues of dollar-per-unit rates. Ericsson's current advocacy, which is belied by the record in numerous respects, is not sincere; it is something Ericsson was forced to pursue after it was caught breaching its promises.

Ultimately, given the factual record and the law, the court acted well within its discretion in using unbounded percentage running royalty rates for TCL's license with Ericsson, and setting those rates at levels *both sides* largely agreed were consistent with the effective percentage rates being paid by [redacted] and [redacted]. That is because determination of the royalty structure for the parties' FRAND license was "first and foremost a question of fact," with the court's finding reviewed only for clear error based on what the record says about the particular circumstances defining the hypothetical negotiation. *Gaylord*, 777 F.3d at 1369; *Bruce v. Weekly World News*, 310 F.3d 25, 29–30 (1st Cir. 2002) (finding no clear error in trial court's adoption of lump-sum license based on industry practice). Here, both parties asked the court to set the FRAND royalty rates for their license using its equitable powers, and that is what it did. *See supra* at pp. 11, 12. The court was not required to use royalty floors and caps just because Ericsson preferred that approach, and the record amply supported the court's findings.[10]

1. *Ericsson only sought to move away from percentage running royalty rates after it was caught breaching its promises.*

Prior to and during this litigation, Ericsson consistently took the position that FRAND royalties should be expressed as a percentage of the selling price of the handset. In particular:

- Ericsson's public announcements regarding W-CDMA and LTE set forth both the maximum reasonable aggregate royalty and Ericsson's specific royalty as percentages of the selling price of the device. Appx75486; Appx76093; Appx65705.
- In its internal communications plan for the LTE announcement, Ericsson said it would assess royalties as a percentage of the price of the handset because it had "decided that a percentage figure is a more appropriate way to determine the royalty rate for handsets" than using a dollar-per-unit rate. Appx76636.

[10] As with its reliance on the top-down method, the court did not rule that every SEP license must *always* incorporate unbounded percentage running royalty rates. Ericsson's references to the court imposing a "mandatory system" and "banning" anything else are unfounded. AB, pp. 51-52. Rather, the court weighed the evidence and exercised its discretion to use unbounded percentage running royalty rates in this case.

- From 2009 to 2015, Ericsson's internal "reference prices" calculated handset royalties as a percentage of the price of the phone, subject to *optional* floors and caps starting in 2012, after Ericsson divested its phone business. Appx53916-18; Appx53694; Appx78075; Appx64651; Appx64656; Appx64659; Appx64664; Appx64669; Appx62720.

- In 2013, when it was litigating a FRAND dispute with Samsung, Ericsson argued that "FRAND is evaluated according to a reasonable percentage of sales." Appx53695-96.

- Between 2013 and 2015, Ericsson entered into at least 20 4G licenses which set forth handset royalties as a percentage of the price of the phone. Appx78338-40; Appx43952-53; Appx44959-71.

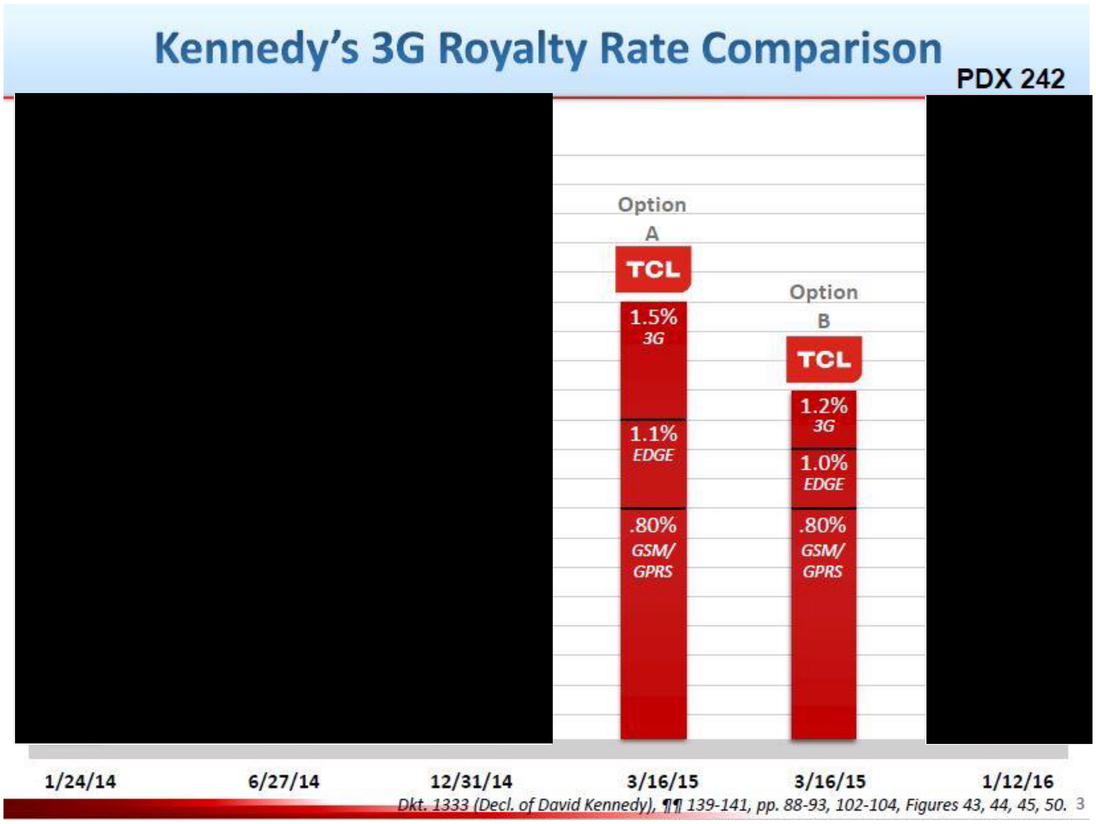
- In 2014, when Ericsson entered into licenses with Samsung, LG, and HTC which incorporated lump sum payments, Ericsson prepared internal "business cases" which "unpacked" the licenses to express the one-way royalty for the license to its SEPs as a percentage of the price of the phone. Appx78715-16; Appx62408-17; Appx64069-70; Appx62381-87; Appx78668; Appx62373-77; Appx53878-83. This was done to evaluate Ericsson's purported adherence to the percentage royalty rates in its reference prices. Appx53883-84;

Appx46179-80.

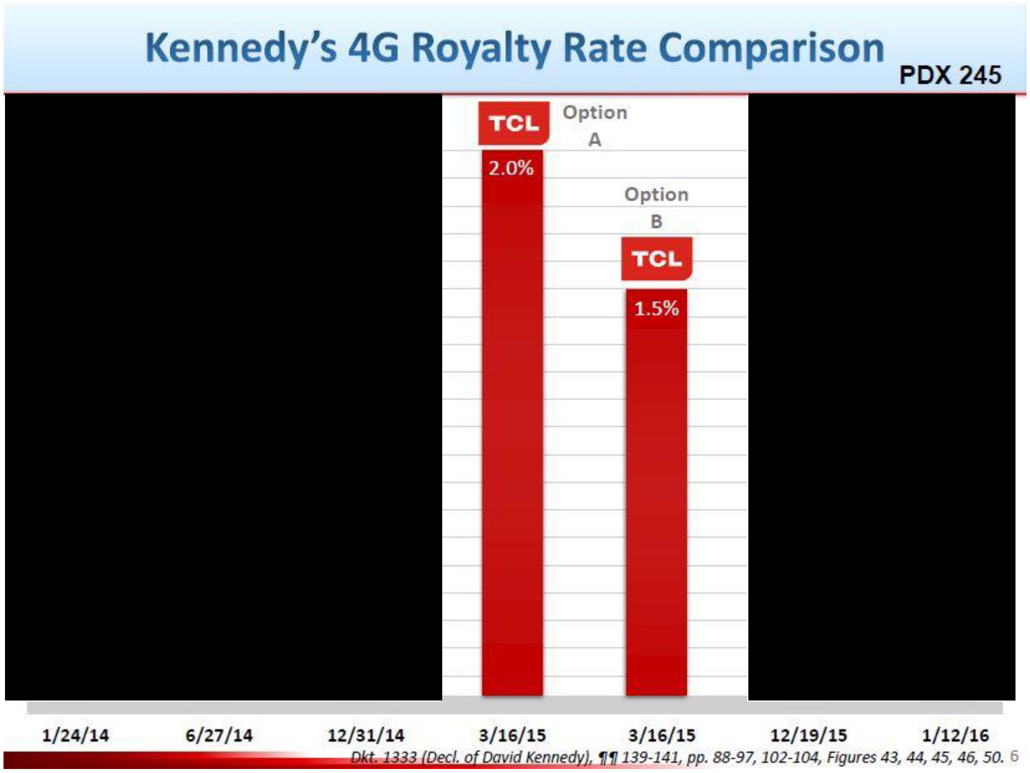
- When Ericsson arbitrated its FRAND dispute with Huawei in 2015, it stipulated that the royalty rates would be calculated as a percentage of the price of the phone, and its witnesses sought to unpack Ericsson's other licenses to percentage rates, contending this was "[c]onsistent with widespread industry practice." Appx79953; Appx78619-20; Appx53883-84; Appx53694-95; Appx81422. Ericsson never unpacked the licenses to dollar-per-unit rates, or argued that was the proper way to evaluate them. Appx53883-84; Appx51494-95.
- In its interrogatory responses, Ericsson described licensing based on percentage rates as "consistent with every single one of its more than 180 license agreements covering its 2G, 3G, and 4G standard essential patents," and "also consistent with industry practice." Appx63817.
- Ericsson's Option A and B offers used percentage rates. Option A used percentage rates for any sales that exceeded a set minimum, and Ericsson said the underlying lump sum payment was determined based on Ericsson's percentage-based reference rates. Appx67323-24; Appx44534-37; Appx75443-44. As for Option B, it used unbounded percentage rates for 2G and 3G, and also a percentage rate for 4G, subject to a floor and cap. Appx67343–44; Appx44539-41.

- Ericsson's licensing expert (Mr. Kennedy) admitted at trial that Ericsson's historical practice—as well as the industry's historical practice—has been to express FRAND royalty rates in percentage terms. Appx53964-67.

Despite this history, Ericsson changed positions during the litigation by abandoning its advocacy for percentage rates in favor of its new support for dollar-per-unit rates. Ericsson did this for two reasons. First, in December 2015, Ericsson entered into a lump sum 4G license with Apple that even Ericsson conceded could not be unpacked to percentage rates consistent with its then-in-effect reference prices. Appx64623-24. The effective rates for Apple's license were anywhere from [redacted] to [redacted] depending on the sales forecast used—far lower than the 1.5% rate in Ericsson's reference prices. Appx53905-11; Appx64643-45. Second, Ericsson lost its arbitration against Huawei, with the arbitrators ruling that Huawei would pay [redacted] for 2G/3G and [redacted] for 4G after determining that [redacted] and [redacted] were paying effective percentage royalty rates substantially lower than the percentage rates offered to Huawei. Appx78770-71; Appx62674-75; Appx62716. Given these developments, Ericsson could no longer support the high percentage royalty rates it was demanding TCL pay. When Ericsson's own licensing expert in this case (Mr. Kennedy) unpacked Ericsson's licenses with Samsung, LG, HTC, Apple, and Huawei in percentage terms, it was clear the resulting effective rates were far lower than what Ericsson was insisting TCL pay under Option A and B:



(Appx60159.)



(Appx60165.)

As Ericsson's economic expert (Dr. Teece) acknowledged at trial, there was no way the wide disparity in percentage rates seen in Ericsson's licenses and reference prices could be considered FRAND, while still adhering to the use of percentage rates. Appx54121-23. Instead, one would have to alter the metric by which the rates are judged, which is exactly what Ericsson's new, transparent advocacy in favor of dollar-per-unit rates is all about. *Id*.

2. *Ericsson's dollar-per-unit rates do not reflect the incremental value of Ericsson's SEPs.*

Ericsson's advocacy in favor of dollar-per-unit rates purports to be based on the idea that such rates best reflect the incremental value of Ericsson's SEPs. AB, pp. 54-56. But the record was devoid of any evidence that there is a fixed dollar value attributable to the practice of Ericsson's SEPs, and there was a wealth of evidence to the contrary.

Prior to closing argument, the court asked the parties to be prepared to address whether there was any evidence regarding the value of Ericsson's SEPs in order to determine whether Ericsson's royalty floors appropriately capture that value. Appx54587-9. Ericsson pointed to three things: (1) Mr. Kennedy's "ex standard" analysis, (2) the fact some of Ericsson's licenses use floors for 4G rates, and (3) Ericsson's reference prices. Appx54639-42. Yet none prove any fixed incremental value of Ericsson's SEPs.

First, the "ex standard" analysis was deeply flawed. Appx51531-35. It relied on inappropriate and unreliable consumer surveys which Ericsson failed to support, and sought to apply general, unreliable "contribution counting" data to specific technologies in a way that was not properly matched. *See id.* Not surprisingly, the court thoroughly rejected the analysis, and Ericsson does not devote any attention to the issue here on appeal. Appx75-79.

Second, Ericsson's licenses do not reflect any fixed value in Ericsson's SEPs. Ericsson and its experts admit that its lump sum licenses (*e.g.*, with Apple, Samsung, LG, and HTC) result in effective royalty rates that are *entirely variable*, in that as sales of licensed devices go up, the effective per-unit royalty rate will decrease, and vice versa. Appx53923-24; Appx54196-97; Appx53888-89. Ericsson's license with Huawei likewise contains unbounded percentage royalty rates. Appx78770-71. Further, the experts' "unpacking" of the licenses to effective dollar-per-unit rates results in a very wide spectrum of rates, belying the notion that Ericsson's SEPs have a fixed, intrinsic value. Appx60177; Appx60183; Appx54193-94, 97-98.

Third, Ericsson's reference prices do not demonstrate any fixed value. They show the opposite. The first three iterations of Ericsson's reference prices did not include any floors for handsets. Appx78075; Appx64651; Appx64656; Appx53912-14. Optional floors were only introduced in 2012 after Ericsson exited the handset business and was no longer incentivized to charge reasonable royalty rates. Appx53912–18; Appx53783-89; Appx64659; Appx79446. According to Ericsson, the option of the floor was only there because if a prospective licensee wanted a cap, then Ericsson would also include a floor. Appx53922-23. And the floors themselves have decreased markedly over time. Appx53918-21. When Ericsson first introduced a 4G floor, it was set at $3.50. Appx53918; Appx64659. By March 2016, Ericsson offered TCL a flat rate for 4G of $1.30 per unit—a decrease of almost 300%.[11] Appx53921; Appx64270.

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[11] Note also that the 2G and 3G rates in Option B lack floors, further undermining the notion that these technologies have a fixed, intrinsic value. Appx67343–44.

As the above shows, Ericsson's royalty floors are not a function of its SEPs having any fixed, intrinsic value; instead, they merely reflect the amount of money Ericsson thinks it can extract in negotiations. Ericsson admitted that with phone prices decreasing, it wants a floor so it can lock in a minimum amount of revenue per unit. Appx53728-29. Royalty floors are thus a part of Ericsson's business strategy—not a reflection of any principled analysis of its patents —in that Ericsson will make more money with floors than without. Appx53729-31.

Not only was there no evidence showing there is a fixed value associated with the practice of Ericsson's SEPs, but the record was replete with evidence to the contrary. For example, when Ericsson announced its approach to LTE rates, its internal communications explained that "the additional value provided by the technology is difficult to estimate in a fixed dollar value . . . . It is simply easier to estimate the royalty rate as a percentage, rather than in dollars, and remove the need to later adjust the fixed dollar amount." Appx76636. In addition, Ericsson's economic expert (Dr. Teece) has written extensively in support of the use of percentage rates, opining that they "[better] align the incentives of the patent holder and the licensee," that dollar-per-unit rates "do not have the flexibility to adjust to changing market conditions that percentage-based running royalties inherently do," and that "[v]alue is context-dependent; there is no such thing as the 'inherent value' of patented technology." Appx54086–91; Appx77859-61. Even in its opening brief, Ericsson admits that a percentage-of-price component is "a staple of patent licensing" which "reflects the fact that more expensive phones generally make more intensive use of Ericsson's patents to enable more valuable features." AB, p. 54.

As Ericsson's counsel noted during closing argument, in order to evaluate whether Ericsson had complied with its FRAND obligation, the court had to use "a common unit of measurement across all the deals." Appx54592. Given the record, the court was well within its discretion to use percentage rates for that purpose, notwithstanding Ericsson's belated preference for dollar-per-unit rates.

3. *The court's decision to not use a floor was well-supported.*

The court acted well within its discretion in deciding that Ericsson's preferred 4G royalty floor would not be included in TCL's license. For example, Huawei is one of TCL's main competitors, and its license with Ericsson has no 4G [redacted]. Appx78770. Ericsson cannot credibly disparage that fact as being the product of arbitration, when Ericsson itself assigned the task of determining FRAND rates to the arbitrators, and told them to use percentage rates. Appx79953; Appx78619-20. If TCL were forced to pay Ericsson's Option B rates, with the $2.00 4G floor, it would pay more in royalties than Huawei on any phone priced at or under [redacted]. Appx53900-05. That is discrimination.

Likewise, Ericsson's licenses with [redacted], and [redacted] do not include any mandatory per-unit floor; instead, each includes a lump sum payment that translates to an effective percentage rate that is entirely variable, and much lower than what Ericsson was asking TCL to pay. Appx53888-89; Appx54196-97; Appx60161-65; Appx78653–816; Appx64059–81; Appx64609–42. These manufacturers all sell competing phones at a variety of price points. Appx43746-68. Indeed, everyone agrees phone prices are decreasing around the world as the standards proliferate. Appx53727-28; Appx44628; Appx48392-93; Appx54051-2. Given this dynamic, requiring TCL and other manufacturers of lower-priced phones to pay a mandatory, minimum royalty of $2.00 for every 4G phone would present an obvious competitive disadvantage relative to their competitors who face no such burden when also selling lower-priced phones.[12] Appx57185.

The court's rejection of a 4G floor was also supported by the fact Ericsson presented no evidence demonstrating it needs a floor, or where a floor should be set. Licensing its patents is only one of many ways Ericsson can and does obtain a return on its investment in the standards. Appx44617-18, 32; Appx54052-55;

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[12] There is no merit to Ericsson's argument that TCL sought and received a better deal than its competitors. Because TCL's license has unbounded percentage rates like the [redacted] license, and because the lump sum payments in the Apple, Samsung, LG, and HTC licenses all translate to effective percentage rates that are entirely variable, each manufacturer will pay a lower effective dollar-per-unit rate when selling a less expensive phone, and a higher effective dollar-per-unit rate when selling a more expensive phone. There is nothing unfair about that, and TCL receives no advantage.

Appx53729-31; Appx44504-05; Appx60471. And Ericsson's licensing business is thriving, with profit margins over 80%. Appx53733-36; Appx63626. Ericsson is also seeking to grow its royalty base by licensing the Internet of Things, and it benefits as a higher volume of devices are sold. Appx53739-41; Appx101510; Appx54053-54. Ericsson continues to invest heavily in the standards, and did not present any evidence which would support the notion that its participation would be at risk if it did not receive a 4G royalty floor. Appx53732-35; Appx44513.

In sum, having asked the court to exercise its equitable discretion to set FRAND royalties, *see supra* at pp. 11, 12, 14, 15, 17, Ericsson has no basis to complain that the court did not utilize a royalty floor in its final injunction, and certainly not when the evidence provided ample support for the court's approach.

4. *Ericsson's brand value argument lacks merit.*

Ericsson's argument that it was error for the court to not apportion out alleged "brand value" associated with Apple and Samsung's revenues when unpacking their licenses fails on numerous counts. AB, pp. 61-64. To begin with, Ericsson failed to timely raise this argument at trial. "If a party fails to raise an argument at trial, it waives any appeal of that issue because, barring a few exceptions, an appellate court does not consider arguments first made on appeal." *Caterpillar Inc. v. Sturman Indus., Inc.*, 387 F.3d 1358, 1368 (Fed. Cir. 2004). Ericsson first raised this argument in a post-trial Rule 52(b) motion. The court rejected Ericsson's argument, both on the merits and on the basis that Ericsson had waived this argument by failing to raise it earlier. Appx56434-50.

Ericsson's argument also contradicts its own discovery responses. In responding to TCL's interrogatories, Ericsson said "the royalty base in any patent license agreement between Ericsson and TCL should be comprised of the selling price at end user terminal." Appx63817; Appx53697–9. Ericsson explained that "[t]he price of the end user device is an appropriate royalty"—indeed, "the most economically reasonable choice for the royalty base"—because "the inventions in cellular standard essential patents . . . increase the value of the end user device as a whole." Appx63818. Ericsson's response said nothing about reducing the base to account for "brand value" or other technologies unrelated to its SEPs.

Consistent with its interrogatory responses, Ericsson's own expert also did nothing to apportion out any revenues associated with "brand value" when unpacking Ericsson's licenses with Apple, Samsung, and others. Appx50915-31, 44-59. Instead, Mr. Kennedy used the licensees' total revenues as part of his unpacking process. *See id.* Nor did Ericsson present any "brand value" expert, or indicate how the unpacking of *each* Ericsson license (not just those with Apple and Samsung) should be modified to account for each respective licensee's "brand value," or any other contribution made by the licensee separate from the value provided by Ericsson's SEPs.[13]

Ericsson argues the court's approach was contrary to various cases, including *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308 (Fed. Cir. 2014), but these cases are inapposite. They dealt with application of the "entire market value rule" in a damages case, wherein the jury was being instructed on how to apply a royalty percentage to the price of the infringing device for purposes of calculating the damages award. Here, in contrast, the court was unpacking prior licenses in order to determine the effective one-way royalty rates actually being paid by the licensees (regardless of whether those rates were FRAND). The cases do not stand for the proposition that it was error for the court to not "back out" any monies associated with "brand value" when unpacking the licenses. Moreover, such an approach was contrary to Ericsson's own position throughout trial, and not supported by its expert analysis, or any evidence as to the specific amount (if any) of each licensee's "brand value."

5. *The court's comparable license analysis was properly conducted.*

Ericsson's argument that the court should have included additional licenses

[13] Ericsson's statement that its dollar-per-unit comparisons were preferable because they "exclud[e] brand value" is false. AB, p. 64. Mr. Kennedy's dollar-per-unit rates were calculated the exact same way as his percentage rates—based on the total pool of revenues for each licensee, not an artificially constrained pool that purports to exclude monies attributable to "brand value." Appx50915-31.

misses the point of non-discrimination. AB, pp. 64-67. The fact some licensees were paying rates consistent with Ericsson's reference prices does not mean TCL should likewise be forced to pay such rates—not when they exceed the fair and reasonable rates produced by the top-down analysis, and are also far higher than what many similarly-situated companies are paying. App44025-32; Appx47010-11. The FRAND obligation would be meaningless if Ericsson's success in getting some licensees to overpay meant all licensees must overpay. *Id*.

It is undisputed that [redacted], and [redacted] are *all* paying effective percentage rates substantially lower than what Ericsson was demanding TCL pay. Appx139; Appx60147; Appx60155-65. At trial, Ericsson conceded TCL was similarly situated to LG, HTC, and Huawei, and on appeal Ericsson does not challenge the court's finding that TCL was also similarly situated to Apple and Samsung (its experts had essentially conceded this as well). Appx51621-22; Appx54061-64; Appx53962-64. Ericsson's economic expert (Dr. Teece) agreed it is discriminatory to charge similarly-situated licensees different prices. Appx54056-60; Appx54270; Appx118920, 44. Because it was undisputed that similarly-situated companies like Apple, Samsung, LG, HTC, and Huawei were paying effective percentage rates substantially lower than Ericsson's offers to TCL, the rates paid by Coolpad (a.k.a Yulong), Karbonn, and ZTE are irrelevant.[14]

The court's decision to not treat Coolpad and Karbonn as similarly situated was also supported by the record. Each company has much lower sales than TCL, with sales focused in one country. Appx47707-10; Appx54066-68; Appx43832-34, 39. TCL's witnesses explained why such companies often lack the bargaining power, resources, or incentive to negotiate a FRAND license, and Ericsson admitted this as well. Appx43863-65; Appx43938-40; Appx44027; Appx47712-18; Appx47759; Appx53597-611. Indeed, when Ericsson previously litigated against Qualcomm, it relied on the same points in arguing Qualcomm's other licenses were not a fair measure of FRAND rates. Appx62879. And the record shows these concerns were not merely hypothetical, in that Ericsson demanded higher rates based on its claim of a 25% share of LTE, when in reality that figure was wildly overstated. Appx53711-12; Appx76093.

Ericsson also says the court ignored the phones most comparable to TCL's, but that is not correct. AB, p. 66. The evidence showed TCL sells and competes at multiple price points, as is also the case with companies like Samsung, LG, and Huawei. Appx43812-17; Appx43725, 30-35, 44-46, 53-62, 67-68; Appx46966-67;

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[14] Ericsson's statement that the court ignored the ZTE license because it required quarterly lump-sum payments is misleading at best. AB, p. 65. What the court concluded is that it could not reliably unpack the ZTE license for numerous, independent reasons. Appx113-14, citing Appx43975-8. But even if the license could have been unpacked, it would not matter for the reasons stated above.

Appx51644-47, Appx51683-90. Even Apple is increasingly selling at lower price points. Appx43727, 47-53; Appx46946-48; Appx46973; Appx51687. Nor is there any "consistent pattern" in Ericsson's royalty rates. AB, p. 66. As shown earlier, Ericsson formerly argued licensees like Samsung, LG, and HTC were paying the higher percentage rates reflected in Ericsson's reference prices (the same high rates being paid by Coolpad and Karbonn), and was only forced to abandon that argument after its arbitration with Huawei demonstrated otherwise. *See supra* at pp. 46-49. Further, there is no rhyme or reason to Ericsson's licenses, even when viewed in dollar-per-unit terms. The data shows a wide disparity of rates, and no correlation to selling price. Appx54193-201; Appx60177-87. The existence of differences in the effective royalty rates being paid by Ericsson's licensees is not a function of how they use Ericsson's SEPs; rather, it is a function of the extent to which Ericsson was able to extract *supra*-competitive royalties from certain licensees.

6. *Ericsson's final criticisms fail.*

At the end of its brief, Ericsson presents a mish-mash of disparate, undeveloped arguments via bullet points and footnotes. This shotgun approach is an improper way to raise allegations of error on appeal. "It is a 'settled appellate rule that issues adverted to in a perfunctory manner, unaccompanied by some effort at developed argumentation, are deemed waived.'" *Tolbert v. Queens Coll.*, 242

F.3d 58, 75 (2d Cir. 2001); *see also SmithKline Beecham Corp. v. Apotex Corp*., 439 F.3d 1312, 1320–21 (Fed. Cir. 2006). In any event, all such matters were addressed and explained by the court in its decision and/or its denial of Ericsson's Rule 52(b) motion. Appx105, 108-9; Appx56434-50.

The only argument Ericsson meaningfully tries to develop is the notion that the court "mismatched wholesale and retail rates." AB, p. 67. Ericsson implies the court only unpacked licenses using retail data from the IDC. *See id.*, p. 68. But that is not true. Both the court and TCL's expert (Dr. Lynde) unpacked Ericsson's licenses *two ways*—once using IDC data, and separately using the sales projections in Ericsson's internal business cases—with the court describing in detail the pros and cons of each approach. Appx97-99, 118-119. The court then considered the results of both approaches in setting the final rates. *See id.*; *see also* Appx120-128.

Ericsson says it asked the court to "correct the error" and it refused, AB, p. 69, but what Ericsson fails to mention is that it raised this argument for the very first time in its Rule 52(b) motion. As the court explained in its resulting order, if Ericsson believed it was inappropriate for the court to make any use of retail sales data (it was not, for the reasons explained by the court), it was required to raise that issue during trial. Appx56441-42. By failing to do so, Ericsson waived its objection. *See id.*; *see also Caterpillar Inc.*, 387 F.3d at 1368.

Nor was there any lack of congruence in the 4G rates, whether as between the top-down analysis and the comparable license analysis, or as between the different approaches to the comparable license analysis. As the court's Figure 11 shows, the final U.S. 4G rate of 0.45% is squarely within the range of unpacked rates, and essentially identical to the results of the top-down analysis using *Ericsson's* desired numerator. Appx124. Figure 11 also shows that the differences in the results of the court's unpacking of the Samsung, LG, and HTC licenses using IDC sales vs. business case sales were not significant. *Id.* Most importantly, Figure 11 shows that *all* of the rates using *every* method are vastly lower than Ericsson's demanded 4G rate of 1.5%, and are clustered around the court's final 4G rate. *Id.*

CONCLUSION

For all of the foregoing reasons, the judgment should be affirmed. Ericsson asked the court to exercise its equitable discretion in setting the FRAND rates for the parties' license, and it did so. The court's analysis was consistent with Ericsson's own historical advocacy, and reflected a thorough, reasonable weighing of a massive amount of evidence. It should not be disturbed on appeal.

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Respectfully submitted,

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UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

CERTIFICATE OF SERVICE

I certify that I served a copy on counsel of record on November 1, 2018
by:

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UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

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/s/ Stephen S. Korniczky
(Signature of Attorney)

Stephen S. Korniczky
(Name of Attorney)

Appellees
(State whether representing appellant, appellee, etc.)

November 01, 2018
(Date)

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Dated: November 1, 2018

SHEPPARD MULLIN RICHTER & HAMPTON LLP

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