No. 19-2039

IN THE **United States Court of Appeals** FOR THE FEDERAL CIRCUIT

CONVERSANT WIRELESS LICENSING S.A.R.L.,

Plaintiff-Appellant,

V.

APPLE INC.,

Defendant-Appellee.

Appeal from the United States District Court for the Northern District of California, Case No. 5:15-cv-05008, Hon. Nathanael M. Cousins

BRIEF OF TELEFONAKTIEBOLAGET LM ERICSSON, ERICSSON INC., PANASONIC CORP., BLACKBERRY UK LTD., AND KONINKLIJKE PHILIPS N.V. IN SUPPORT OF PLAINTIFF-APPELLANT AND REVERSAL

Jeffrey A. Lamken *Counsel of Record* Rayiner I. Hashem Lauren M. Weinstein MOLOLAMKEN LLP The Watergate, Suite 660 600 New Hampshire Avenue, N.W. Washington, D.C. 20037 (202) 556-2010 (telephone) (202) 556-2001 (facsimile) jlamken@mololamken.com

Counsel for Amici Curiae

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT					
Conversant Wireless Licensing S.A.R.L. v. Apple Inc.					
Case No. 19-2039					
	CERTIFICATE OF INTEREST				
Counsel for the: \Box (petitioner) \Box (appellant) \Box (respondent) \Box (appellee) \blacksquare (amicus) \Box (name of party)					
certifies the following (use "None"	if applicable; use extra sheets if neces	sary):			
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			
Telefonaktiebolaget LM Ericsson	Telefonaktiebolaget LM Ericsson	None			
Ericsson Inc.	Ericsson Inc.	Ericsson Holding II Inc., Telefonaktiebolaget LM Ericsson			
Panasonic Corporation	Panasonic Corporation	None			
KONINKLIJKE PHILIPS N.V.	KONINKLIJKE PHILIPS N.V.	None			
BLACKBERRY UK LTD.	BLACKBERRY UK LTD.	BLACKBERRY 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: MoloLamken LLP: Jeffrey A. Lamken, Rayiner I. Hashem, Lauren M. Weinstein 					

FORM 9. Certificate of Interest

 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).

 None

 9/16/2019
 /s/ Jeffrey A. Lamken

 Date
 Signature of counsel

 Please Note: All questions must be answered
 Jeffrey A. Lamken

 cc:
 all counsel of record

Reset Fields

TABLE OF CONTENTS

INTEREST OF AMICI CURIAE1			
INTR	ODU	TION	
SUM	MARY	OF ARGUMENT	
ARG	UMEN	Т9	
I.		istrict Court's Remand Determination Contravenes lent and The Record9	
	A.	The District Court Failed To Apply <i>Therasense</i> 's Requirement That, "But-For" the Non-Disclosure, the Patentee Would Not Have Obtained the Right It Asserts	
	B.	Traditional Equitable Principles Require Materiality14	
	C.	Eschewing the Materiality Requirement Invites the Maladies <i>Therasense</i> Sought To Cure17	
	D.	Nokia's Untimely Disclosure Was Immaterial18	
		 The Disclosure Was Immaterial Because ETSI Seeks the Best Technical Solutions, Not Unpatented Technologies	
		 The Disclosure Was Immaterial Because Nokia Had Already Assured ETSI of Willingness To License on FRAND Terms	
II.	Pronc	imited Nature of The Record Counsels Against Broad uncements That Could Damage Well-Functioning ards-Setting Processes	
	А.	The Record Provides No Proper Basis for Reaching Conclusions Regarding the Meaning of the IPR Policy or ETSI's Operation	

В.	The Remand Proceedings Exacerbated the Record Defects	28
C.	The Threat of Destabilizing ETSI's Processes Further Counsels Caution	29
CONCLU	SION	30

TABLE OF AUTHORITIES

Page(s)

CASES

<i>1st Media LLC v. Elec. Arts, Inc.</i> , 694 F.3d 1367 (Fed. Cir. 2012)
<i>Alcatel USA, Inc. v. DGI Techs., Inc.,</i> 166 F.3d 772 (5th Cir. 1999)15
<i>Bein v. Heath</i> , 47 U.S. 228 (1848)15
Capitol Converting Equip., Inc. v. LEP Transp., Inc., 965 F.2d 391 (7th Cir. 1992)25
Columbus Bd. of Educ. v. Penick, 443 U.S. 449 (1979)16
Core Wireless Licensing S.A.R.L. v. Apple Inc., 899 F.3d 1356 (Fed. Cir. 2018)passim
Corona Cord Tire Co. v. Dovan Chem. Corp., 276 U.S. 358 (1928)11, 16
<i>Eckes v. Card Prices Update</i> , 736 F.2d 859 (2d Cir. 1984)15
Hynix Semiconductor, Inc. v. Rambus Inc., 645 F.3d 1336 (Fed. Cir. 2011)14
<i>Kitchen v. Rayburn</i> , 86 U.S. 254 (1874)15
<i>Miller v. Robertson</i> , 266 U.S. 243 (1924)27
Mitchell Bros. Film Grp. v. Cinema Adult Theater, 604 F.2d 852 (5th Cir. 1979)15

Nagano v. McGrath, 187 F.2d 753 (7th Cir. 1951)15
<i>Paramount Aviation Corp. v. Agusta</i> , 178 F.3d 132 (3d Cir. 1999)15
<i>Parklane Hosiery Co. v. Shore</i> , 439 U.S. 322 (1979)
Penn Int'l Indus. v. Pennington Corp., 583 F.2d 1078 (9th Cir. 1978)
Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806 (1945)16
<i>Qualcomm Inc. v. Broadcom Corp.</i> , 548 F.3d 1004 (Fed. Cir. 2008)13, 14, 22, 23
<i>Qualcomm Inc. v. Broadcom Corp.</i> , 539 F. Supp. 2d 1214 (S.D. Cal. 2007)13
<i>Refac Int'l, Ltd. v. Lotus Dev. Corp.</i> , 81 F.3d 1576 (Fed. Cir. 1996)14
Sheldon v. Metro-Goldwyn Pictures Corp., 309 U.S. 390 (1940)15
Therasense, Inc. v. Becton, Dickinson & Co., 649 F.3d 1276 (Fed. Cir. 2011)passim
U.S. for Use of White Masonry, Inc. v. F.D. Rich Co., 434 F.2d 855 (9th Cir. 1970)
Woodbridge Place Apartments v. Washington Square Capital, Inc., 965 F.2d 1429 (7th Cir. 1992)

OTHER AUTHORITIES

Gil Ohana & C. Bradford Biddle, "The Disclosure of Patents and	
Licensing Terms in Standards Development," The Cambridge	
Handbook of Technical Standardization Law: Competition,	
Antitrust, and Patents (Jorge L. Contreras ed., 2018)	26
Jorge L. Contreras, Fixing FRAND: A Pseudo-Pool Approach to	
Standards-Based Patent Licensing, 79 Antitrust L.J. 47 (2013)	17
Joseph Farrell et al., Standard Setting, Patents, and Hold-Up,	
74 Antitrust L.J. 603 (2007)	24
Justice & Fed. Trade Comm'n, Antitrust Enforcement and Intellectual	
Property Rights: Promoting Innovation and Competition (2007)	27
Joseph F. Wayland, Acting Asst. Att'y Gen., Antitrust Div.,	
U.S. Dep't of Justice, Antitrust Policy in the Information Age:	
Protecting Innovation and Competition, 2012 WL 4457132	
	27
(Sept. 21, 2012)	
Restatement (Second) of Torts §940, cmt. c (1979)	15
Richard Li & Richard Lidar Wang, Reforming and Specifying	
Intellectual Property Rights Policies of Standard-Setting	
Organizations: Towards Fair and Efficient Patent Licensing and	
Dispute Resolution, 2017 U. Ill. J.L. Tech. & Pol'y 1 (2017)	17
Dispute Resolution, 2017 O. III. J.L. Teeli. & For y 1 (2017)	1 /

INTEREST OF AMICI CURIAE

This appeal concerns an alleged breach of the Intellectual Property Rights ("IPR") policies issued by the European Telecommunications Standards Institute ("ETSI"). With over 800 members, ETSI develops cellular-communications standards like 2G, 3G, 4G/LTE, and 5G. Amici are ETSI members who have made numerous technological contributions to ETSI standards and who have been awarded patents on technology used in those standards. They have committed to licensing their standard-essential patents ("SEPs") to users of the standards, like phone makers, on fair, reasonable, and non-discriminatory ("FRAND") terms. Several amici also make products that use the standards and license SEPs from other ETSI members. Amici thus have an interest in the development of balanced rules for disclosing and enforcing SEPs. As members of ETSI, they are well qualified to discuss ETSI, its method for selecting technical solutions, and its disclosure process under the IPR Policy.¹

Telefonaktiebolaget LM Ericsson is a leading innovator, with inventions ranging from the first digital telephone exchange to Bluetooth[®]. Ericsson invests more than \$4 billion annually in research and development, devoting more than 20,000 employees to those efforts. Ericsson has been awarded more than 49,000

¹ No one, other than *amici* or their counsel, made a monetary contribution to the preparation or submission of this brief or authored this brief, in whole or in part. *Amici* have filed a motion for leave to file this brief pursuant to Federal Rule of Appellate Procedure 29(a)(3) and Federal Circuit Rule 29(c).

patents worldwide. It has played a major role in developing the 2G, 3G, 4G/LTE, and 5G standards, and has contributed many patented technologies. Ericsson also makes equipment for cellular networks, supplying more than 1,000 service providers in 180 countries. Ericsson licenses cellular SEPs from other ETSI members.

Panasonic Corp. is an active contributor to standardized technologies and a leading provider of consumer products, services, and business solutions that incorporate such technologies. Panasonic is well situated to provide its perspectives as a major holder of SEPs and an implementer of the technologies that involve them. As a contributor, Panasonic plays a central role in establishing standards that enable interoperability among devices, including TVs, smartphones, and digital cameras. Such standards benefit consumers and society as a whole. Panasonic has made significant contributions to the development of communications standards, including 2G, 3G, and LTE. As a leading provider of consumer products, services and business solutions, Panasonic also deploys standardized technologies to serve these same ends. Panasonic's roles as contributor and implementer of standardized technologies give it a deep—and balanced—interest in the issues in this appeal.

BlackBerry UK Ltd. has been a leading innovator in the mobile-communications field for 30 years, investing substantial sums into research and development of communications technologies. BlackBerry's innovations led to the commercialization of some of the earliest smartphones in the U.S. It owns approxi-

mately 37,500 patents and applications worldwide. BlackBerry has actively participated in developing ETSI standards and has contributed many patented technologies to the 2G, 3G, 4G, and 5G standards. Throughout BlackBerry's history, it has both licensed its SEPs to, and licensed SEPs from, other ETSI members.

Founded in 1891, Koninklijke Philips is one of the largest electronics companies in the world. Headquartered in Amsterdam, Philips has primary divisions and global sales in the areas of healthcare and consumer lifestyle. Philips also has a long history of contributing to international standards. Its recent contributions in the fields of mobile communications include GSM and Wi-Fi. Philips has been involved in standards activities, driving specifications work as well as holding board positions with many organizations and consortia. Philips has played a major role in developing the 2G, 3G, and 4G/LTE standards, and is the holder of many patents essential to these standards. Philips has successfully licensed its SEP portfolios on FRAND terms to some of the largest mobile device manufacturers.

INTRODUCTION

ETSI's IPR Policy seeks to establish a balanced framework for the contribution of patented technology to ETSI standards. ETSI, unlike some other standards bodies, does not seek to create "royalty-free standards" unencumbered by patents. ETSI instead chooses the "best technical solution" for each aspect of the standard, recognizing that the "best" solutions often are patented. To ensure patent holders

cannot seek unreasonable royalties for patents essential to practicing the standard, ETSI seeks a so-called "FRAND" commitment for patented technology that may be incorporated into the standard. Under that commitment, ETSI members agree to license essential patents on fair, reasonable, and non-discriminatory terms.

ETSI's IPR Policy also requires members to "timely" disclose essential IPR. The Policy does not define "timely," in part because the Policy's main concern is ensuring that essential IPR will be available on FRAND terms. The Policy provides that, upon disclosure of essential IPR, ETSI will seek a FRAND commitment with respect to that IPR. ETSI takes other actions—such as investigating alternative technologies—only if an ETSI member refuses to make such a commitment. ETSI takes no further action, however, when disclosures are accompanied by or result in FRAND commitments. Moreover, ETSI technical committees anticipate that long-time ETSI contributors will make essential IPR available on FRAND terms. It thus is commonplace for ETSI members to submit IPR disclosures, together with a commitment to license that IPR on FRAND terms, *after* the design for a release of the standard has been "frozen."

That framework has proven immensely successful. It has enabled ETSI to focus on building the best standards with the best technology. It has made standardization more efficient by reducing the time technical committees must spend dealing with IPR issues. It has ensured that innovators can receive adequate com-

pensation for contributing patented technologies to standards. And it has protected licensees from having to pay unreasonable royalties—they pay only FRAND royalties—to implement standards.

The decision below threatens to unsettle that balanced, proven framework. This Court previously ruled that—based on the record before it—Nokia had failed to "timely" disclose its application for U.S. Patent No. 6,477,151 (the '151 patent); it therefore remanded for determination of the proper remedy. Core Wireless Licensing S.A.R.L. v. Apple Inc., 899 F.3d 1356 (Fed. Cir. 2018).² On remand, the district court ruled that Nokia's untimely disclosure rendered the '151 patent unenforceable because Nokia had obtained an "unfair benefit" when the '151 patent's technology was included in the 2G/GPRS standard. In reaching that result, however, the district court departed from this Court's remand guidance and the basic precepts of equity that guidance reflects. Consistent with equitable principles, this Court ruled that waiver would be implied, rendering the patent unenforceable, "only ... where ... misconduct *resulted* in [an] unfair benefit." Id. at 1368 (quoting Therasense, Inc. v. Becton, Dickinson & Co., 649 F.3d 1276, 1292 (Fed. Cir. 2011) (en banc)). It remanded for the district court to decide whether Nokia or Conversant obtained a benefit "as a result of" the untimely disclosure, *id.* at 1369; whether "inequitable consequences flowed from" that omission, id. at 1368. The

² *Amici* did not participate in developing the factual record upon which this Court found that Nokia had breached ETSI's disclosure policy.

Case: 19-2039 Document: 36 Page: 14 Filed: 10/18/2019

district court identified no evidence, *none*, that the '151 patent was incorporated into the standard "as a result of" any non-disclosure. It identified no alternative technology, much less an equivalent, unpatented one. And it denied that Nokia's promise to license its 2G-related patents on FRAND terms was relevant—even though that provided the very commitment ETSI would have asked for had Nokia disclosed earlier. In doing so, the district court fundamentally misconstrued ETSI's IPR Policy and the standards applied by ETSI's technical committees.

The decision is also rooted in assumptions about ETSI's IPR Policy—a contractual provision that applies to over 800 ETSI members—that do not reflect how ETSI works. Unfortunately, the district court was not given the benefit of a fully developed record. The record instead consists of testimony from a single Apple expert, who did not fully describe the multifaceted bargain reflected in ETSI rules. As a result, the Court should carefully limit any ruling to the particular record here, and avoid announcing general principles concerning patentees' disclosure obligations to standards-setting organizations.

SUMMARY OF ARGUMENT

I.A. When this case was last before this Court, the Court held that Nokia had breached its obligation under the ETSI IPR Policy to timely disclose the '151 patent application and remanded for the district court to address remedy under *Therasense Inc. v. Becton, Dickinson and Co.*, 649 F.3d 1276 (Fed. Cir. 2011) (en

banc). The district court, however, departed from *Therasense*'s central teaching as well as general equitable principles. *Therasense* requires that, before a patent can be held unenforceable based on non-disclosure, there must be proof not only of an omission, but that the non-disclosed information is material-that the failure to disclose resulted in some unfair benefit. Applying *Therasense* here, Apple had to prove that, "but for" the untimely disclosure, Nokia would not have obtained the benefit of having its technology included in the standard. But the district court denied that any showing of materiality is required. Indeed, there was no evidence of *any* alternative to Nokia's technology—much less that earlier disclosure would have changed the standard. The district court posited that there was a "reasonable possibility" that disclosure would have changed the outcome. But "possibility" is not the standard. And, with zero evidence, Apple's proof failed under that standard too. It certainly was not clear-and-convincing proof.

B. The decision below defies basic precepts of equity. Application of an equitable defense requires proof that the right the plaintiff asserts is a fruit of the asserted misconduct. Finding a patent unenforceable because a patentee failed to disclose information that would have had no effect defies that fundamental principle. Dispensing with the materiality requirement also creates an unbounded defense that threatens to make valuable patent rights unenforceable even absent materiality or intent to deceive.

C. Departure from *Therasense*'s materiality requirement could throw the work of standards bodies into disarray. A rule that finds patents unenforceable for failure to disclose immaterial information invites the evils—wasteful over-disclosure and litigation gamesmanship—that *Therasense* sought to banish.

D. Earlier disclosure of the '151 patent application would not have caused ETSI to redesign the standard to avoid Nokia's technology. ETSI's policy is to select the best technical solutions. Even according to Apple, ETSI at most uses disclosures to break a tie. The district court identified no alternatives to the '151 patent that ETSI could have chosen, much less one that was equivalent and unpatented. ETSI's IPR Policy, moreover, provides that, upon a member disclosing an essential IPR, ETSI will seek a FRAND commitment for that IPR. Only if the member refuses to commit to FRAND licensing will ETSI seek to work around the IPR. Here, Nokia had made a blanket FRAND commitment. ETSI thus would not have tried to avoid Nokia's patent, even if Nokia had disclosed earlier.

II. While reversal is warranted based on the existing record, *amici* note the record evidence of ETSI's IPR Policy, and how ETSI's standardization process operates, is plagued with gaps in this case. The limited record, combined with the magnitude of the issues at stake, counsels caution. The evidence on these issues came from a single, unopposed Apple expert. Rules that could affect an innovative and economically important industry should be announced only after thorough

exploration, which was absent here. Any determinations regarding the contractual commitments under the ETSI IPR Policy, moreover, are considered findings of fact. Consequently, they should affect only this case, and lack application to future cases with different parties and a different record.

ARGUMENT

I. THE DISTRICT COURT'S REMAND DETERMINATION CONTRAVENES PRECEDENT AND THE RECORD

When this case was last before this Court, the Court held that Apple's unenforceability claim is governed by the principles adopted *en banc* in *Therasense*. The Court observed that Apple's "implied waiver" defense is "analogous" to the "inequitable conduct" defense in *Therasense* because both "involve[] the breach of a disclosure duty." 899 F.3d at 1368. The "same equitable considerations" apply to both. *Id.* The decision below, however, failed to apply one of *Therasense*'s most fundamental equitable requirements: that any omission be "material," *i.e.*, that the wrongdoing "resulted in" the patentee obtaining the right it asks the court to enforce. 649 F.3d at 1291-92. Here, Apple argues that Nokia improperly failed to disclose the '151 patent application to ETSI before the '151 patent's technology was incorporated into ETSI standards, allowing Nokia/Conversant to "extract licenses" from phone makers. Appx41.³ But the district court assumed away

³ *Amici* do not address Conversant's argument (at 11-14) regarding whether the '151 patent is standards-essential.

materiality, refusing to require a causal "connec[tion]" between the alleged untimely disclosure and the technology's inclusion in the standard. *Id.* Nor could causation be found. Despite bearing a burden of clear-and-convincing proof, Apple has shown no alternative to the Nokia technology ETSI chose. And if the '151 patent had been disclosed, ETSI would *only* have asked for a commitment to license it on FRAND terms—a commitment Nokia was clearly prepared to make, since it had already made such a commitment for *all* its 2G-related patents. A nondisclosure that could have no effect is immaterial under any standard.

A. The District Court Failed To Apply *Therasense*'s Requirement That, "But-For" the Non-Disclosure, the Patentee Would Not Have Obtained the Right It Asserts

Therasense is clear: The defense of unenforceability requires proof of a causal link between the patentee's misconduct and the unfair benefit it obtained. 649 F.3d at 1291. For example, where a patentee engaged in "inequitable conduct" by not disclosing prior art to the PTO, that "misconduct" is immaterial—and will not render the patent unenforceable—unless the non-disclosure "*resulted* in the unfair benefit" of the patentee having been granted the patent. *Id.* at 1292 (emphasis added). Under *Therasense*, materiality requires proof that *timely* disclosure would "have changed the ... decision" to grant the patent. *Id.*

By contrast, failure to disclose information that was "immaterial"—indeed, could not have changed the outcome—does not "extinguish" the patent right. *Therasense*, 649 F.3d at 1290 (citing *Corona Cord Tire Co. v. Dovan Chem. Corp.*, 276 U.S. 358, 374 (1928)). Put differently, the patentee's silence must be the "but-for cause" of the right the patentee asserts. *Id.* at 1291. Absent such "but-for proof," *id.* at 1292, the defendant cannot show that the non-disclosure "*resulted* in the unfair benefit," *id.* at 1293, and lacks any basis in equity to assert that the patent is unenforceable.

1. Invoking those principles, this Court previously held that, because "implied waiver ... may render an entire patent unenforceable," the doctrine "'should only be applied in instances where ... misconduct *resulted* in [an] unfair benefit." *Core Wireless*, 899 F.3d at 1368 (emphasis added) (quoting *Therasense*, 649 F.3d at 1292). This Court thus remanded for assessment of "any benefit that Nokia or [Conversant] may have obtained *as a result of*" untimely disclosure, *id*. at 1369—whether an "inequitable consequence *flowed from*" Nokia's omission, *id*. at 1368. But the Court recognized that, absent proof of materiality under *Therasense*, the patent would not be unenforceable. ""[E]nforcement of an otherwise valid patent,'" it stated, "'does not injure the public merely because of misconduct ... that was immaterial.'" *Id*. (quoting *Therasense*, 649 F.3d at 1292).

2. The district court therefore was required to find—by clear and convincing evidence, *see Therasense*, 649 F.3d at 1287—that Nokia gained an unfair advantage "as a result of" untimely disclosure. Apple had to prove that, had Nokia

timely disclosed the '151 patent application, ETSI would *not* have included Nokia's technology in the standard.

Despite that mandate, the district court jettisoned materiality. Appx43. Apple, it held, did not need to "connect [Nokia's] nondisclosure with the inequitable benefit." *Id.* Likewise, "but-for proof" that ETSI's adoption of Nokia's technology resulted from Nokia's untimely disclosure was "not required." *Id.* Instead, the court ruled, Apple only needed to show that Nokia's conduct somehow "deprived ETSI members of the opportunity to make a fully informed decision as to the technical solution" *Id.*

That formula eschews materiality. Under it, failure to disclose even information that clearly would not have changed ETSI's decision could make the '151 patent unenforceable because ETSI was denied an opportunity to consider it—to be "fully informed"—and reject it. That risks making unenforceability a near-automatic penalty for disclosure violations of no consequence. That is precisely what *Therasense* and this Court's prior decision in this case reject. 899 F.3d at 1368; *see* Conversant Br. 30-31.

3. The district court did state "there was a reasonable *possibility* that the '151 patent would not have been incorporated" had Nokia made timely disclosure. Appx43 (emphasis added). As explained below, Apple cannot meet even that standard. *See* pp. 18-23, *infra*. But it is wrong regardless. The district court cited

Case: 19-2039 Document: 36 Page: 21 Filed: 10/18/2019

no authority for its "reasonable possibility" standard. *Therasense* requires much more—clear and convincing evidence of but-for materiality, *i.e.*, clear and convincing evidence that timely disclosure "would . . . have changed the . . . decision." 649 F.3d at 1293.

4. This Court's pre-*Therasense* decision in *Qualcomm Inc. v. Broadcom Corp.*, 548 F.3d 1004 (Fed. Cir. 2008), does not suggest otherwise. This Court has made clear that "*Therasense* changed the" law. *1st Media LLC v. Elec. Arts, Inc.*, 694 F.3d 1367, 1372 (Fed. Cir. 2012). This Court's prior decision in this very case instructed the district court to apply current law—"the same equitable considerations" as in *Therasense*—to decide whether Nokia's untimely disclosure "*resulted* in [an] unfair benefit.'" 899 F.3d at 1368; *see id.* at 1369 (whether "any benefit" "obtained as a *result of*" untimely disclosure); *id.* at 1368 (whether inequity "*flowed from*" Nokia's omission). And it cautioned that failure to disclose "immaterial" information should not result in unenforceability. *Id.* at 1368. The directive to apply *Therasense* could not have been clearer.

Qualcomm at most confirms that materiality must be proven. There, this Court relied on the district court's findings as to "materiality of the withheld information." 548 F.3d at 1024. The district court assessed Qualcomm's conduct under the then-applicable materiality standard for inequitable conduct. 539 F. Supp. 2d 1214, 1216-17 (S.D. Cal. 2007), *aff'd in relevant part*, 548 F.3d 1004 (Fed. Cir.

2008) (citing Refac Int'l, Ltd. v. Lotus Dev. Corp., 81 F.3d 1576, 1581, 1585 (Fed. Cir. 1996) (pre-Therasense "reasonable examiner" standard)). The "goal" of the standards body there, JVT, "was to develop a *royalty-free* 'baseline' profile" of the standard. 548 F.3d at 1012-13 & n.2 (emphasis added). The district court found that Qualcomm's failure to disclose relevant patents—which it would not license royalty-free-was material because it allowed Qualcomm to seek royalties in connection with what was to be a "royalty-free" standard. Id. at 1024-26. Although Qualcomm predated Therasense, the non-disclosure there met a "but-for" standard. JVT sought to create a royalty-free standard and *undoubtedly* would have tried to design-around Qualcomm's patents had they been disclosed earlier. Perhaps for that reason, Qualcomm did not dispute materiality, and this Court had no need to address it further. 548 F.3d at 1024-26.⁴ *Oualcomm* in no way contradicts the materiality standard Therasense establishes, and which this Court directed the district court to apply. See Conversant Br. 28-29.5

B. Traditional Equitable Principles Require Materiality

The district court's approach to materiality also departs from general principles of equity. Equitable defenses, such as implied waiver, are premised on the no-

⁴ *Qualcomm*'s holding that a patentee cannot "rely on the effects of its misconduct" to avoid "implied waiver," Appx43, shows that the infringer need not prove that *it relied* on the omission, 548 F.3d at 1021. But *materiality* is required. *Id.* at 1024.

⁵ *Hynix Semiconductor, Inc. v. Rambus Inc.*, 645 F.3d 1336, 1349 (Fed. Cir. 2011), another pre-*Therasense* case, did not address the findings required to hold a patent unenforceable because it found no breach of the patentee's disclosure duty.

tion that courts will not use their powers to help plaintiffs to "derive an advantage from their own wrong." *Kitchen v. Rayburn*, 86 U.S. 254, 263 (1874); *see Bein v. Heath*, 47 U.S. 228, 247 (1848). Because the doctrine's "rationale ... is that equity will not aid a person to reap the benefits of his own misconduct," the doctrine does not apply if the right asserted "did not accrue to [the plaintiff] because of the misdeed." Restatement (Second) of Torts §940, cmt. c (1979). Equity provides relief "for actual, not for possible" harms; it requires proof of what "did" happen, not what "might" have happened. *Sheldon v. Metro-Goldwyn Pictures Corp.*, 309 U.S. 390, 399-400 (1940). This Court recognized as much in the last appeal. "An equitable defense will not be recognized," it held, "if the offending party did not gain a benefit from its wrongdoing." 899 F.3d at 1368. That requirement—an unfair benefit resulting from the misconduct—pervades the law.⁶

Moreover, because "equity" is "reluctant" to "work a forfeiture of plaintiff's property" rights, *Nagano v. McGrath*, 187 F.2d 753, 759 (7th Cir. 1951), courts require causation before destroying property rights, *see Eckes v. Card Prices Up-date*, 736 F.2d 859, 861 (2d Cir. 1984) (copyright unenforceable only if undis-

⁶ See Mitchell Bros. Film Grp. v. Cinema Adult Theater, 604 F.2d 852, 863 (5th Cir. 1979) (defendant must "personally [have] been injured by the plaintiff's conduct"); Paramount Aviation Corp. v. Agusta, 178 F.3d 132, 148 (3d Cir. 1999) ("party claiming implied waiver must show that it was misled and prejudiced by the other party's conduct"); Alcatel USA, Inc. v. DGI Techs., Inc., 166 F.3d 772, 797 (5th Cir. 1999) (attempted tortious interference that "was never successful" because no "customers were actually deterred" cannot support equitable defense).

closed facts would support "rejection" by Copyright Office); *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 815 (1945) (patent unenforceable only if it is "the fruit[]" of fraud); *cf. Corona Cord Tire Co. v. Dovan Chem. Corp.*, 276 U.S. 358, 374 (1928) (filing "reckless" "affidavits" that were not "indispensable to the granting of the patent" does not void presumption of validity). The "remedy imposed by a court of equity should be commensurate with the violation." *Core Wireless*, 899 F.3d at 1368 (quoting *Columbus Bd. of Educ. v. Penick*, 443 U.S. 449, 465 (1979)). The district court destroyed property rights and held Apple harmless for infringement—absent a shred of proof that Nokia's allegedly untimely disclosure harmed Apple or anyone else. The district court did not work equity; it gave Apple a windfall.

Moreover, the district court made no finding of bad intent. In the inequitable conduct context, the defendant must prove not only materiality, but also clear and convincing evidence of "specific intent to deceive." *Therasense*, 649 F.3d at 1290. The district court found that Nokia did *not* engage in egregious conduct, Appx40, rejecting arguments that Nokia had bad intent, Appx38 ("Nokia made no . . . false statements"); *see* Appx39 (no "improper motive"); *id.* (no "nefarious" or "suspicious" conduct); Conversant Br. 45-46 (no evidence of hold-up). The district court thus invoked the most extreme sanction in patent law, *Therasense*, 649 F.3d at

1288, without finding either that ETSI would have done anything differently (*i.e.*, that the omission was material), or that Nokia had intent to deceive.

C. Eschewing the Materiality Requirement Invites the Maladies *Therasense* Sought To Cure

This Court has already noted the consequences of "reduced standards for intent and materiality." *Therasense*, 649 F.3d at 1288. They produce over-disclosure: For example, the pre-*Therasense* inequitable conduct standard encouraged "patent prosecutors [to] regularly bury PTO examiners with a deluge of prior art references, most of which ha[d] marginal value." *Id.* at 1289. That "tidal wave of disclosure" made "identifying the most relevant prior art more difficult and strain[ed] the agency's examining resources." *Id.* at 1289-90 (quotation marks omitted). And "charging inequitable conduct ha[d] become a common litigation tactic," causing respected lawyers to accuse respected lawyers and scientists of deceit and fraud. *Id.* at 1289.

The decision below threatens to visit those same problems on standards bodies like ETSI. Requiring that an ETSI member immediately disclose all potentially relevant IPR invites disclosures "that are not actually essential, or even relevant, to a standard." Jorge L. Contreras, *Fixing FRAND: A Pseudo-Pool Approach to Standards-Based Patent Licensing*, 79 Antitrust L.J. 47, 60-62 (2013). Overdisclosure "would reduce the efficiency of SEP license negotiation." Richard Li & Richard Lidar Wang, *Reforming and Specifying Intellectual Property Rights* Policies of Standard-Setting Organizations: Towards Fair and Efficient Patent Licensing and Dispute Resolution, 2017 U. Ill. J.L. Tech. & Pol'y 1, 33-34 (2017). And it "would force SEP holders to ... analyze their own patents ceaselessly" to determine whether they might arguably be essential to a standard, even if the SEP holder was *already* committed to FRAND licensing generally. *Id*.

Gamesmanship prospects abound. Here, Apple asserts that Nokia's untimely disclosure was "misconduct." But Apple engages in the same supposed "misconduct" with respect to nearly all of its own ETSI disclosures. As explained below, more than 90% of Apple's disclosures are filed *after* finalization. Apple cannot genuinely believe that such filings are the sort of "misconduct" that should kill patents. It instead seeks to avoid paying the judgment—regardless of collateral damage to ETSI, or to continued innovation in the field of cellular technology.

D. Nokia's Untimely Disclosure Was Immaterial

Regardless of which materiality standard applies—*Therasense*'s "but-for" standard or the district court's "reasonable possibility" standard—Apple cannot meet its burden. Nokia's alleged untimely disclosure was immaterial.

1. The Disclosure Was Immaterial Because ETSI Seeks the Best Technical Solutions, Not Unpatented Technologies

ETSI's objective is to create standards "based on solutions which best meet ... technical objectives." Appx3331, §3.1. Apple's expert agreed that ETSI "choose[s] the best technical solution." Appx970. Conversely, ETSI does not sift

through disclosures to identify unpatented technology. *Id.* (ETSI "wouldn't choose something just because it was IPR-free"); *see* Conversant Br. 37-38 (Apple expert admitting that he could not recall a single ETSI technical meeting where IPR disclosures were reviewed).

Here, Nokia's technology (included as an option in Ericsson's proposal) evidently was the best solution, as ETSI chose it. There is no basis for suggesting that early disclosure of the '151 patent application would have changed that result. Had there been a superior alternative, that alternative would have been selected regardless. And if Nokia's design were not the best alternative, it would not have been selected. Earlier disclosure thus could not have caused ETSI to "change[] [its] decision." *Therasense*, 649 F.3d at 1293. Regardless, Apple surely did not prove the contrary by clear-and-convincing evidence. Conversant Br. 33.

Apple's expert asserted that ETSI would prioritize selecting a patent-free solution where "two solutions were [both] technically the best." Appx970. The district court, however, identified *no* equally meritorious alternative to Nokia's technology that ETSI could have chosen instead. It identified no proposal that was displaced by Nokia's, much less one that was unpatented such that ETSI might have preferred it to Nokia's patented solution.⁷ Apple's expert conceded he had

⁷ Apple argued that the standard's other options for transmitting timing values were alternatives. Appx4299-4300. But those are the prior-art methods, which lack the

"no evidence that [ETSI] would have chosen another technology ... but for Nokia's supposedly untimely disclosure of the '151 IPR." Appx975. Given Apple's clear-and-convincing burden, its claim of materiality falls short.

The district court found "a reasonable possibility that the '151 patent would not have been incorporated" because "ETSI members are incentivized to choose technical solutions that are free of licensing costs." Appx43 (citing Appx970). ETSI does no such thing; at most it might prefer unpatented technology in the event of a tie. But there was no evidence of a tie or anything approaching it. Speculation that ETSI might have acted differently by selecting a never-identified technology cannot meet the clear-and-convincing standard.

2. The Disclosure Was Immaterial Because Nokia Had Already Assured ETSI of Willingness To License on FRAND Terms

When a member discloses IPR that may be or may become essential to a standard, ETSI asks the member to commit to licensing the IPR on FRAND terms. In this case, Nokia had made a blanket commitment to license its 2G-related patents on FRAND terms in January 1997. Thus, by the time the 2G/GPRS standard was finalized in June 1998, ETSI had an assurance of Nokia's willingness to license the IPR on FRAND terms—the exact assurance the disclosure process

^{&#}x27;151 patent's bandwidth-conserving features. *Core Wireless*, 899 F.3d at 1358. The district court never found that they were equivalent alternatives.

Case: 19-2039 Document: 36 Page: 29 Filed: 10/18/2019

exists to secure. Earlier disclosure therefore could not have changed ETSI's decision to include Nokia's technology in the 2G/GPRS standard.

a. ETSI does not seek to create a royalty-free standard. Its "objective" is to create "standards ... based on solutions which best meet ... technical objectives." Appx3331, §3.1. ETSI contemplates that the standards will include patented contributions. Indeed, one of ETSI's goals is to ensure that "IPR holders" are "adequately and fairly rewarded for the use of their IPRs" in the standards. *Id.*, §3.2. ETSI's concern, therefore, is not screening-out patented contributions, but addressing the "risk" that "essential IPR" could be "unavailable" for licensing on fair and reasonable terms. *Id.*, §3.1; *see* Conversant Br. 35-36.

To that end, Section 4 requires members to use "reasonable endeavors" to "timely inform ETSI of essential IPRs." Appx3331, §4.1. What happens next is critical. Sections 6-8 provide: "When an essential IPR ... is brought to the attention of ETSI, the Director-General of ETSI shall immediately request the owner *to give an undertaking ... that it is prepared to grant irrevocable licenses on ... [FRAND] terms*." Appx3332, §6.1 (emphasis added). Only if "a member notifies ETSI that it *is not prepared* to license an IPR" on FRAND terms will ETSI search for "a viable alternative technology" which "is not blocked by that IPR" and "satisfies ETSI's requirements." *Id.*, §8.1.1 (emphasis added); *see* pp. 27-28, *infra*.

Here, however, the '151 patent was covered by the blanket FRAND commitment for Nokia's 2G-related patents. There was no "risk" that essential IPR would be "unavailable" on FRAND terms. The *only* effect earlier disclosure of the '151 patent could have had would be to prompt ETSI to seek an assurance—that Nokia would license the patent on FRAND terms—that ETSI already had. Neither Apple nor the district court explained how *that* could render the disclosure material.

The district court deemed Nokia's willingness to license on FRAND terms to be "beside the point." Appx42. Even a "FRAND license," it reasoned, "may be inequitable if the licensing party was forced to obtain [a] license" for technology that otherwise would not have been incorporated into the standard. Appx42-43. But that assumes the materiality finding the district court never made and rejected as unnecessary—that the '151 patent *would not* have been included in the standard had Nokia made a timely disclosure. Nor could such a finding be possible given ETSI's understanding that Nokia was willing to license the patent on FRAND terms. *See* p. 21, *supra*.

b. The district court's invocation of *Qualcomm* for the notion that FRAND royalties can be an inequitable "burden," Appx43, is therefore misplaced. There, the standards-body, JVT, sought to make the standard partly royalty-free. 548 F.3d at 1024-26; *see* pp. 13-14, *supra*. Qualcomm allegedly concealed patents covering the royalty-free portion. A FRAND commitment—provided *after* suit

was filed—could not alter the fact that Qualcomm's conduct had converted what was supposed to be a royalty-free standard into a royalty-bearing one.

This case is precisely the opposite. ETSI does not aim to create a royaltyfree standard. The IPR Policy aims to secure FRAND commitments with respect to technology included in the standard. Nokia's assurance that it was willing to license on FRAND terms fulfilled that goal. *See* pp. 21-22, *supra*.

To be sure, where non-disclosure upends a standards body's goals, as in *Qualcomm*, prejudice may result. But the burden of proving prejudice, by clearand-convincing evidence, rests on the party asserting unenforceability. Apple did not come close to meeting that burden here.

II. THE LIMITED NATURE OF THE RECORD COUNSELS AGAINST BROAD PRONOUNCEMENTS THAT COULD DAMAGE WELL-FUNCTIONING STANDARDS-SETTING PROCESSES

In all events, the Court should hesitate before making any pronouncements regarding ETSI's standardization processes that could reach beyond the parties in this case. The scope of ETSI disclosure obligations—like all contractual questions involving extrinsic proof—is factual in nature. "Resolving the nature of an ambig-uous contract through extrinsic evidence is a factual determination." *Woodbridge Place Apartments v. Washington Square Capital, Inc.*, 965 F.2d 1429, 1439 (7th Cir. 1992); *see U.S. for Use of White Masonry, Inc. v. F.D. Rich Co.*, 434 F.2d 855, 859 (9th Cir. 1970) ("meaning" of "ambiguous" contract "a question of fact"). But

the record on those issues is shockingly thin here. It is limited to 45 minutes of testimony from one expert from one party. That record provides no basis for the articulation of general principles that could impair ETSI's well-functioning ecosystem of standards development and licensing.

A. The Record Provides No Proper Basis for Reaching Conclusions Regarding the Meaning of the IPR Policy or ETSI's Operation

On issue after issue, the inadequacy of the record—and its potential for mischief—is clear. For example, the last time this case was on appeal, this Court addressed when participants must disclose their patents to ETSI. 899 F.3d at 1368. The "only witness to testify" on that issue "was Apple's [expert] Dr. Walker." *Id.* at 1366. Conversant presented no expert witness and no evidence to address unenforceability. The Court was, as a result, obligated to credit "Dr. Walker's unrebutted testimony." *Id.* at 1367. And that lone "testimony made it clear" that Nokia "had a duty to disclose its IPR no later than" the so-called "freeze date" of June 1998. *Id.* at 1368. A proper record, however, would show exactly the opposite.

Drafting history. ETSI has consistently refused to establish a specific deadline for disclosure. In 1994, the European Commission "pressed ETSI to clarify the meaning of 'timely' in its disclosure rules." Joseph Farrell *et al.*, *Standard Setting, Patents, and Hold-Up*, 74 Antitrust L.J. 603, 627 (2007). ETSI, however, opted against defining "timely." *Id.*; *see* Appx3331, §§3.1, 15; Appx3499 ("[d]efinitions for 'Timeliness' or 'Timely' cannot be agreed"). ETSI thus opted against a bright-line rule like requiring disclosure by the freeze date. Apple's expert, however, suggested the contrary, and no Conversant expert was present to offer a different view.

<u>Course of dealing</u>. The notion that disclosure is required by the freeze date defies nearly uniform and longstanding practice before ETSI. In determining contractual obligations, courts routinely look to parties' "course of dealing." *See Capitol Converting Equip., Inc. v. LEP Transp., Inc.*, 965 F.2d 391, 395 (7th Cir. 1992). It turns out that filing IPR disclosures on or after the freeze date—when it is typically too late for ETSI to change the design—is the rule, not the exception. *Amici* reviewed disclosures for several ETSI standards (3GPP releases 8-14), developed from 2006-2017.⁸ The following table shows the freeze date for each release, and the number and percentage of disclosures filed after that date, for ETSI as a whole and Apple specifically:

3GPP- Release No.	Freeze Date	No. of Disclosures After Freeze Date		% of Disclosures After Freeze Date	
		ETSI	Apple	ETSI	Apple
Release-8	3/12/2009	15724	873	89.9%	100.0%
Release-9	3/25/2010	8164	256	96.6%	100.0%
Release-10	6/8/2011	18594	782	98.3%	100.0%
Release-11	3/6/2013	11740	195	95.3%	80.9%
Release-12	3/13/2015	11510	63	85.2%	75.9%
Release-13	3/11/2016	6560	114	86.3%	99.1%
Release-14	6/9/2017	1558	24	72.2%	100.0%

⁸ Data drawn from commercial database available at https://www.iplytics.com. The figures for Apple only include patents originally assigned to Apple.

Other surveys have produced similar results. *See* Wilson Br. 6, 11-12 in No. 17-2102 (Fed. Cir.); Gil Ohana & C. Bradford Biddle, "The Disclosure of Patents and Licensing Terms in Standards Development," *The Cambridge Handbook of Technical Standardization Law: Competition, Antitrust, and Patents* 248 (Jorge L. Contreras ed., 2018) ("[N]early all of the disclosures filed in connection with two particular LTE specifications were received after the 'freeze date.'"); Conversant Br. 31 (from 1996-2010, 88% of ETSI disclosures filed after publication).

These figures make clear that nearly all IPR disclosures—at least 70% and often over 95%—are made after the freeze date. Apple filed *thousands* of such after-the-freeze-date disclosures from 2009-2017; from 2016-2017, more than 99% of its disclosures were filed after the freeze date. That shows that ETSI members (including Apple) do not understand the IPR Policy to require disclosure by the freeze date. And it shows that such late disclosure typically is *immaterial* to ETSI. Were ETSI to actually rely on specific IPR disclosures to decide what technologies to include in the standards, it would not be able to function with thousands of disclosures coming in after the standard is frozen. Such disclosures cause no havoc, as ETSI members simultaneously make the FRAND commitment ETSI would have sought had disclosure been made earlier. In all events, Apple should not be able to invoke equity in seeking to punish Conversant and Nokia for the same conduct that Apple itself engages in serially.

ETSI's reasonable endeavor and commitment requirements. The disclosure rules are but one provision of ETSI's IPR Policy, and must be construed in light of "the whole instrument." *Miller v. Robertson*, 266 U.S. 243, 251 (1924). The focal point of ETSI's policy is the FRAND commitment, which prevents "hold up" of the standard with unreasonable licensing demands. U.S. Dep't of Justice & Fed. Trade Comm'n, *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition* 46 (2007). The disclosure rules, by their terms, aim to secure FRAND commitments for all essential patents. Appx3331, §3.1 ("reduce the risk" that essential IPR could be "unavailable" on FRAND terms); *see* Appx3499 ("[T]here is only a problem with late IPR declarations if the patent is not available at all for licensing, or is not available on ... (FRAND) terms.").

That explains why ETSI consistently treats disclosures made after the freeze date as "timely." It is the "failure to obtain a [FRAND] licensing commitment"— not non-disclosure—that would "cause[] the standard body to consider whether it should modify the proposed standard to avoid including the patented technology ... before it is finalized." Joseph F. Wayland, Acting Asst. Att'y Gen., Antitrust Div., U.S. Dep't of Justice, *Antitrust Policy in the Information Age: Protecting Innovation and Competition*, 2012 WL 4457132, at *2 (Sept. 21, 2012). Where a party that has contributed technology to the standard makes a disclosure after the freeze date, but simultaneously commits to FRAND licensing, ETSI has precisely

what it seeks. It does not need to redesign the standard to avoid that IPR. By that same token, the party's not having disclosed the IPR earlier is immaterial. The end result is the same.

B. The Remand Proceedings Exacerbated the Record Defects

As explained above, before this Court remanded for further proceedings, the record was devoid of testimony about the function of ETSI's interlocking provisions, the link between disclosure obligations and FRAND commitments, or course of dealing. Even on that limited testimony, the district court initially found no breach, as "Apple presented no evidence that any ETSI member or other entity interpreted Nokia's failure to disclose the patent in 1998 as evidence that Nokia relinquished its patent rights." 899 F.3d at 1366. Based on the testimony of Apple's witness, this Court was compelled to disagree, resulting in the remand.

Proceedings on remand then made those deficiencies worse. Although this Court remanded for application of *Therasense*—which had not been addressed before—Apple fought to exclude relevant evidence. Dkt. 540 at 4, 7 (objection to expert discovery on remedy issues, such as "the ETSI standard setting process," "whether participants in that process rely at all on" disclosures, "whether standards are set based on such disclosures, or whether Nokia's conduct was at all atypical"). Apple fought to exclude *amicus* briefs, complaining that they added "new evidence and expert opinions." Dkt. 561 at 2. The district court obliged. Dkts. 541, 564. Given the extraordinarily limited nature of the resulting inquiry, this Court should exercise extreme caution before articulating any conclusion of any potential breadth. Because the nature of ETSI disclosure obligations is a factual issue, of course, any determination in this case can have no application in a different case "prosecuted by different parties, and based on different evidence." *Penn Int'l Indus. v. Pennington Corp.*, 583 F.2d 1078, 1083 (9th Cir. 1978); *cf. Parklane Hosiery Co. v. Shore*, 439 U.S. 322, 331 (1979). The Court should give serious consideration to stating so expressly.

C. The Threat of Destabilizing ETSI's Processes Further Counsels Caution

Finally, the need to carefully limit the Court's determinations is reinforced by the potential for destabilization. Accepting the decision below—that "untimely" post-freeze disclosures create implied waivers because they deny ETSI the opportunity to consider unpatented alternatives—could have devastating consequences for patent rights. 90% of disclosures are made after the freeze date for each ETSI standard. Under the standard applied below, each such disclosure is "misconduct" that could render related patents unenforceable, with no showing of bad intent or materiality.

That view, if accepted, could have wide-ranging implications for an innovative and economically important industry. Patentees would over-disclose to avoid risk, or eliminate risk altogether by declining to participate in ETSI. Over-disclosure would hurt good-faith implementers by reducing the accuracy and usefulness of ETSI's IPR database. Licensing negotiations would become mired in uncertainty as counter-parties leveled charges of unenforceability for routine disclosure practices. Litigation would flourish, with licensees seeking unenforceability rulings against otherwise robust patents. And the standardization process itself could be impaired, as ETSI members reallocate their efforts away from innovation toward disclosure. Those risks provide still more reason to circumscribe the scope of any decision in this appeal.

CONCLUSION

The judgment should be reversed or, at the very least, vacated and remanded for application of the correct standards.

September 16, 2019

Respectfully submitted,

<u>/s/ Jeffrey A. Lamken</u> Jeffrey A. Lamken *Counsel of Record* Rayiner I. Hashem Lauren M. Weinstein MOLO LAMKEN LLP The Watergate, Suite 660 600 New Hampshire Avenue, N.W. Washington, D.C. 20037 (202) 556-2000 (telephone) (202) 556-2001 (fax) jlamken@mololamken.com

Counsel for Amici Curiae

CERTIFICATE OF SERVICE

I certify that today, September 16, 2019, I electronically filed the foregoing document with the Clerk of the Court for the U.S. Court of Appeals for the Federal Circuit using the appellate CM/ECF system. Participants in the case who are registered CM/ECF users will be served by the appellate CM/ECF system.

September 16, 2019

/s/ Jeffrey A. Lamken

CERTIFICATE OF COMPLIANCE

- This brief complies with the type-volume limitations of Fed. R. App. P. 29(a)(5) and Fed. Cir. R. 32(a) because this brief contains 6,939 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(f) and Fed. Cir. R. 32(b).
- This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in a proportionally spaced typeface using Microsoft Word in Times New Roman 14-point font.

September 16, 2019

/s/ Jeffrey A. Lamken